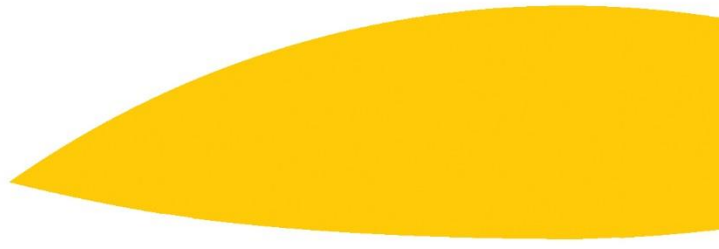


# Sustainability Report 2017



Consolidated non-financial report  
pursuant to Legislative Decree 254/2016  
(Directive 2014/95/EU)





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# Sustainability in Iren:

## Highlights 2017

### VALUE

- 3,697 million Euro of revenue
- 357 million Euro of investments
- 1,277 million Euro of added value for stakeholders
- 0.070 Euro of dividend per share proposed by the BoD



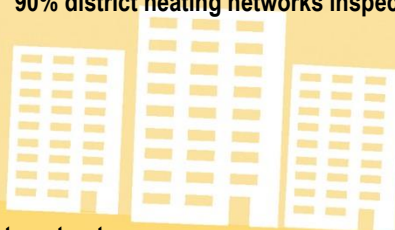
### ENVIRONMENT

- 2,756,532 tonnes of CO<sub>2</sub> avoided
- 553,400 TOE saved
- 86% of electricity produced by environmentally friendly sources (renewable or similar)
- 60.6% separated waste collection on average (national average 52.5%)
- 27.6% water network leaks on average (national average 40.66%)
- over 21,000,000 plastic bottles avoided from 62 "Acquapubblica" water distribution points



### CUSTOMERS

- 1,783,400 customers in the energy sector
- 2,641,000 inhabitants served in the integrated water service, 2,100,000 in environmental services and 871,000 in district heating
- 77 service counter positions and around 430,000 customers served
- 2 million call centre responses
- over 90% of customers satisfied
- over 738,000 parameters analysed in drinking water and wastewater
- 3.9% electricity network leaks (national average 6.7%)
- 51% electricity substations checked
- 85% gas networks inspected
- 90% district heating networks inspected



### IREN PEOPLE

- 98% of employees have a permanent contract
- 152 new hires
- 88% of employees attended at least one training course
- 1,603 women work within the Group and make up 46% of the BoD





## SUPPLIERS

- 677 million Euro of orders issued
- Local suppliers account for 49%
- 28 social cooperatives work with Iren
- 3,380 hours of training for third party companies
- 778 suppliers involved in the survey on environmental and corporate responsibility



## INSTITUTIONS

- 9 Trade Unions at a national and international level
- employee training on corruption prevention
- balance between tariffs and investments in the local area for the Integrated Water Service



## COMMUNITY AND LOCAL AREA

- 40 projects by the Local Committees for sustainability
- 926 profiles registered on the Irencollabora.it platform
- 243 projects supported in favour of the community
- workforce, vehicles and economic resources to support communities affected by disasters

## SHAREHOLDERS AND FINANCIAL BACKERS

- +170% growth of the Iren share in the last 3 years
- growth forecast of around 10% annually for the dividend per share
- Fitch Ratings “Investment Grade” BBB with stable outlook, improved by one notch compared to 2016
- Green Bond of 500 million Euro for 18 environmental sustainability projects



## FUTURE GENERATIONS

- 90,300 students from over 700 schools were involved in the educational offer Edu.Iren
- 110 plants opened to students and residents
- 135 students on combined school and work model
- 80 companies participated in the “Iren Startup Award”
- over 10 million Euro for innovation and research projects





## LETTER TO THE STAKEHOLDERS

This year the Iren Group Sustainability Report is taking on a new function to fulfil the role of Consolidated Non-Financial Report (NFR) as foreseen by Italian Legislative Decree 254/2016. This highlights the way in which a strategic approach to corporate social responsibility is becoming increasingly important in the long term for business competitiveness. This is a function that strengthens Iren Group's focus both in terms of information transparency and in considering **sustainability as a strategic driver of growth**.

In 2017 we updated our vision and our mission, the foundations on which the 2022 Business Plan that we presented at the end of the year is built on. It defined the pillars of our future action plan: the customer/resident, development and efficiency, sustainability and a focus on human resources. The objectives and targets we have identified in these areas represent Iren Group's response to the call to action for change by the **UN's 2030 Agenda** and will increasingly make the Sustainability Report a tool for monitoring our operations and our economic, environmental and social impacts.

The satisfaction of **customers/residents**, who are increasingly active and independent in their choices, lies at the foundation of it all, and in 2017 we reached levels of excellence: over 95.6 out of 100 in sales services and from 89.3 to 96.5 in regulated services. This outcome is also the result of the Group's constant commitment to **investing in services and infrastructure** (349 million Euro in 2017). This focus on residents and communities also materialises in our strong and continuous **interaction with schools** – which involves over 90,000 young people via Edu.Iren and 135 students in the combined school and work project – and in the creation of over 240 **innovative, cultural, environmental and social initiatives**.

**Development and efficiency** produce effects for stakeholders and the sustainability of the local areas and they also translate into significant **added value**, with 1,277 million Euro **generated and distributed** in 2017, into an increase in the dividend for shareholders and in the distribution of contracts to suppliers for over 670 million Euro, involving them in a corporate social responsibility survey to increase their awareness in regards to assessing the environmental and social impacts of their work. To this we can add the **expansion of the customer base**, which was close to 1.8 million at the end of 2017, and **territorial expansion** that, thanks to an investment agreement signed at the end of the year, will see Acam La Spezia join Iren Group in 2018, with significant consolidation in the integrated water service and in environmental services.

**Environmental sustainability** is seen in our commitment to **decarbonisation**, with around 2.8 million tonnes of CO<sub>2</sub> avoided (+4% compared to 2016) thanks to the development of district heating, the energy efficiency of production processes and customer-aimed services, and the generation of energy and heat from renewable sources or similar (86% of total production). This commitment has been recognised by the 2017 Carbon Disclosure Project, which awarded Iren Group the highest evaluation for the second year running (level A). Results achieved in waste management pre-empt the targets of Europe's **circular economy**: 100% of urban waste is recovered as material or energy and separated waste collection exceeds 60% in the area served, with points that place our areas among the top in Italy. The **sustainable use of water resources** translates into actions to guarantee the outstanding quality of aqueduct networks, the reduction in leaks and environmental withdrawals for drinking water, combined with the superior quality of treatment systems thanks to around 1,200 plants managed with elevated performance in pollutant reduction. The quality of our projects and our environmental performance is widely recognised by our investors, as shown by the outcome of the first **Green Bond** issued by the Group in 2017, for a total amount of 500 million Euro, which recorded total demand of over four times the amount offered.

The focus on sustainability makes attention to **human resources** increasingly important, which requires complete sharing of strategies, together with strong commitment and motivation to achieve the objectives we have set for the future. That is why the enhancement and development of skills, training, health and safety and corporate welfare were also areas of great commitment in 2017. The job system and the performance management system were fully implemented during the year to define **courses for growth, professional qualification and the merit development of human resources**. Heavy investment was made in training, which involved 88% of the Group's 6,285 employees. Similar commitment was made to strengthen the Group's skills, also by hiring 152 new employees, with a particular attention to under 30s (52% of new hires).

The tangible results we are able to report for 2017 derive from our daily commitment to managing our business, produced by the professionalism and dedication of the men and women that make up the Iren Group and the robustness of the value system that directs our work, on which we continue to focus heavily, as evidenced by the work we carried out in 2017, which also saw us renew our **Code of Ethics**.

These results are described in this document, which is designed to inform our stakeholders on everything they need to know. That is why their participation and collaboration at a project level within the Local Committees – who we would like to thank – is fundamental, not only for improving our reporting, but above all, for developing initiatives with positive economic, environmental and social outcomes.

The integrated and strategic approach to corporate social responsibility forms the basis of this Report and the 2022 Business Plan that commits the Group to playing a proactive role in communities and the environment. It also involves the opportunity to push ourselves to speed up technological innovation, both in processes and socially.

Therefore, the integrated reporting system removes any conflict between the social and economic aspects of the business and any hierarchical demand that is more or less disguised between values that are equally fundamental. It is the management's responsibility to combine and harmonise the various interests within a time frame, even in the long term, that is compatible with the different needs and expectations that surround the company and ensure that this can be correctly and truthfully understood by its stakeholders.

The Chairman  
Paolo Peveraro



The Deputy Chairman  
Ettore Rocchi



Chief Executive Officer  
Massimiliano Bianco





# NOTE ON METHODOLOGY

The 2017 Sustainability Report, referring to the period 1 January - 31 December 2017, also constitutes a Consolidated non-financial Report (NFR), pursuant to Italian Legislative Decree no. 254 of 30 December 2016.

The document was prepared under the coordination of the Corporate Social Responsibility and Local Committees Department, in compliance with the Global Reporting Initiative (GRI) Standard: Comprehensive Option and the Electric Utilities supplement– G4 Sector Disclosure.

The data are reported through the Sustainability Report/NFR application which permits tracking, verification and approval of all required data.

The Sustainability Report/NFR is prepared annually by Iren Group (the 2016 report was published in March 2017) and approved by the Board of Directors together with the draft Statutory Financial Statements and the Consolidated Financial Statements.

The 2017 Sustainability Report/NFR was approved by the Board of Directors' Meeting held on 7 March 2018.

The document was subject to review by the appointed auditor, PricewaterhouseCoopers S.p.A., pursuant to Italian Legislative Decree 254/2016 and based on the principles and indications contained within ISAE3000 (International Standard on Assurance

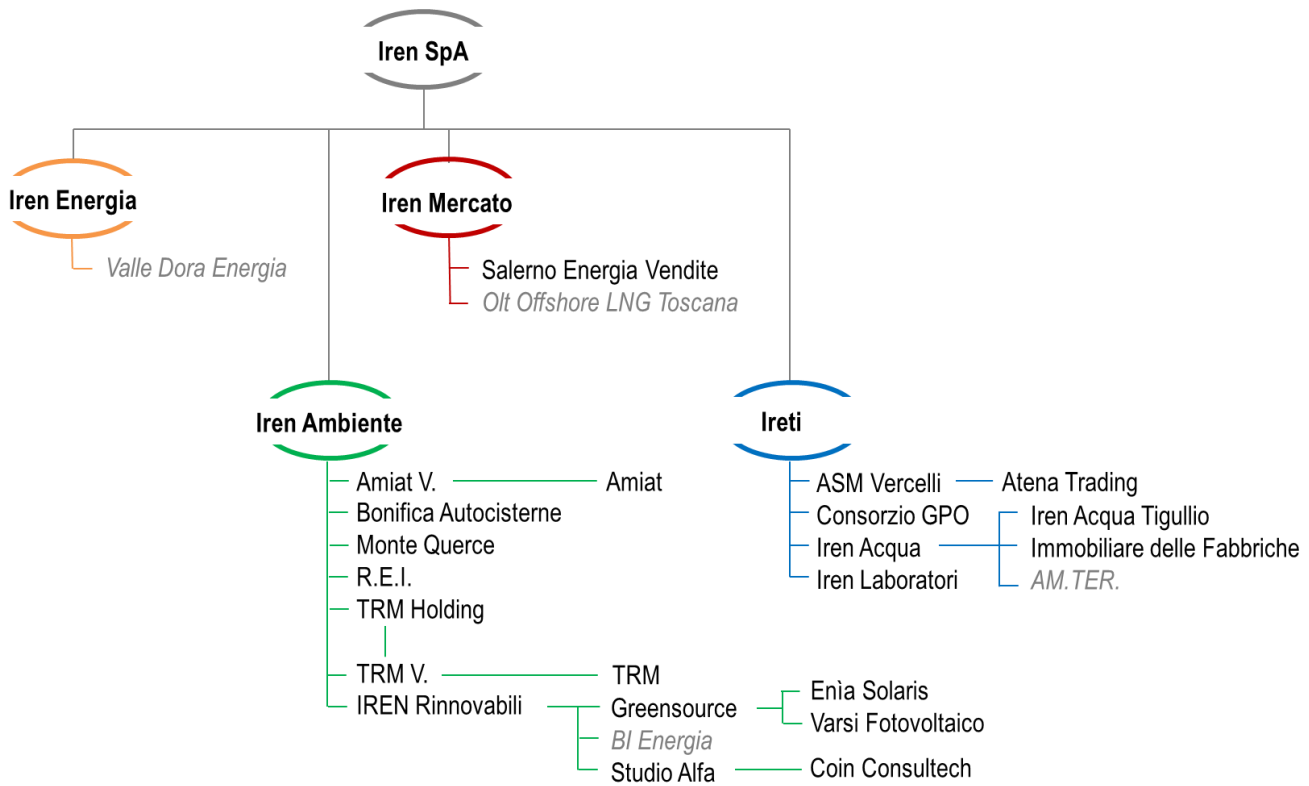
Engagements 3000 - Revised) of the International Auditing and Assurance Standard Board (IAASB).

PricewaterhouseCoopers S.p.A. is also the company appointed to the legal auditing of the Consolidated Financial Statements of Iren Group.

## SCOPE OF CONSOLIDATION

The scope of consolidation for the preparation of the Sustainability Report/NFR is indicated in the table below and takes into consideration:

- all of the fully consolidated companies of Iren Group, with exception of those in liquidation as at 31/12/2017 or destined to be transferred. The company Iren Rinnovabili and its subsidiaries (Greensource, Enia Solaris, Studio Alfa, Coin Consultech and Varsi Fotovoltaico) are reported qualitatively and quantitatively in separate boxes for 2017, as they have been subject to the direction and coordination of Iren S.p.A. since 22/12/2017;
- The qualitative and quantitative information for four not fully consolidated companies, which are considered significant for the proper representation of the Group's activities (AM.TER., OLT Offshore LNG Toscana, Valle Dora Energia and BI Energia), are given in separate boxes.



Legend: in gray and italics the companies not fully consolidated, considered relevant for sustainability

Compared to 2016, changes to the scope of reporting concern:

- the **entry** of Iren Rinnovabili and its subsidiaries (Greensource, Enia Solaris, Studio Alfa, Coin Consultech and Varsi Fotovoltaico), which the Group acquired at the end of 2017;
- the **merger by incorporation** with effect from 1 January 2017 of Iren Servizi e Innovazione into Iren Energia and of Iren Gestioni Energetiche in Iren Mercato, as well as the merger by incorporation from 1 June 2016 of Gea Commerciale in Salerno Energia Vendite;
- the **name change** of Mediterranea delle Acque to Iren Acqua, of Idro Tigullio to Iren Acqua Tigullio, of Laboratori Iren Acqua Gas to Iren Laboratori and of Atena to ASM Vercelli.

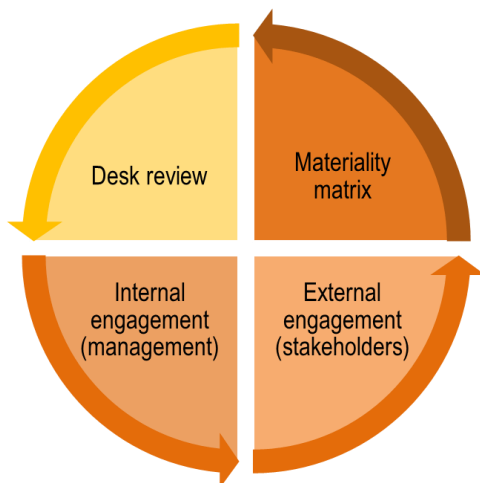
Any limitations in regards to the scope of the Sustainability Report are duly indicated, as well as any restatement of the data related to the previous two-year period. It should be noted that, generally, the data referring to ASM Vercelli (former Atena) reported in this document for 2016 refer to the period 1 May 2016 - 31 December 2016 (consolidation period).

In order to guarantee the reliability of the information provided, directly measurable amounts have been included, thus limiting the use of estimates as much as possible. Estimated amounts are indicated as such. The calculations are based on the best information available or on sample surveys.

## MATERIALITY

The materiality analysis is the assessment of the significance attributed by Iren Group and by its stakeholders to topics, which become subject to reporting in this Sustainability Report. This allows to underline the connection of the relevant topics with the Group's strategy and ensures that the requests for information of the various stakeholders are taken into consideration.

The materiality analysis process conducted by Iren Group is a dynamic process that is carried out in various stages:



- **desk review:** identification of the spectrum of potentially significant topics through the analysis of Italian Legislative Decree 254/2016, the GRI standard and other publications, national and international sustainable development targets, the Group's Strategic Plan and the related sustainability objectives, the financial and sustainability reporting of the Group, previous materiality analysis, customer satisfaction surveys, media analysis and peer and competitor sustainability reporting;
- **internal engagement:** assessment of potentially significant topics by the first line of the Group's management in order to identify relevant topics for Iren;
- **external engagement:** assessment of potentially significant topics by Iren's Local Committees in order to identify relevant topics for stakeholders. The 93 Associations/Institutions that participate in the Local Committees represent the main categories of stakeholders of Iren Group: consumers/customers, employees, suppliers, institutions, shareholders, environment, local communities and future generations;
- developing the **materiality matrix** that defines the topics reported in this document;
- approval of the results of the materiality analysis by the Board of Directors on 23 January 2018.

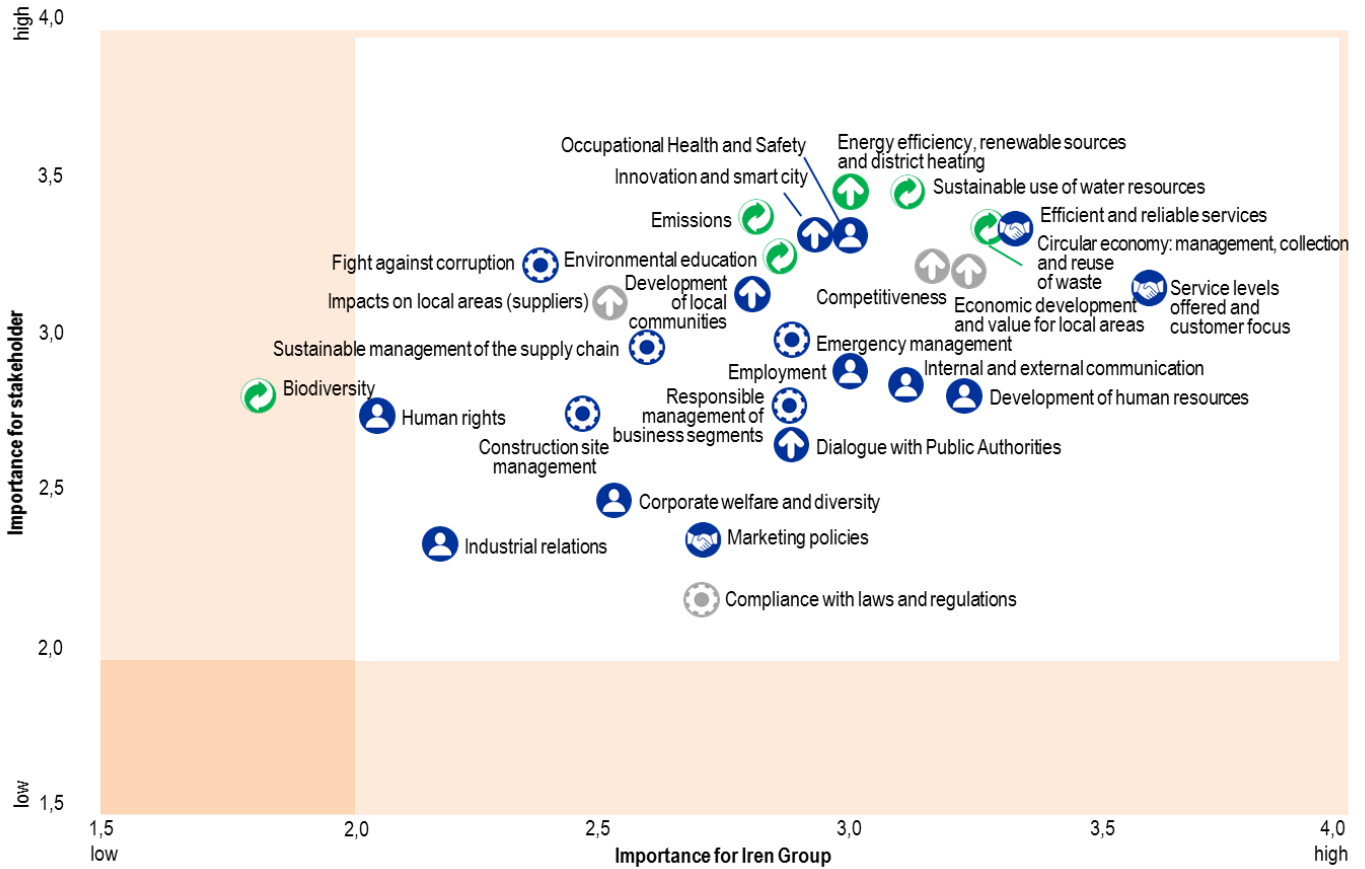
The materiality analysis conducted in 2017 led to the identification and better definition of certain significant topics for Iren Group development and to the creation of shared value:

- the "competitiveness on the market" complements the set of topics held to be relevant by the Group and its stakeholders;
- the "innovation" topic was extended within the "smart city" project, with which it developed strong interrelations and which represents an important issue for communities and local areas;
- the topic of "circular economy: management, separated waste collection and reuse of waste" emphasises the focus on the reuse and recovery of material in waste management with a view to the environmental sustainability of resources;
- the topic of "service levels offered, customer focus and changes in customer expectations" leads to a future vision of customers and to the future change of their role from consumer to prosumer, thus a party that becomes increasingly integral to the generation of services.

The materiality matrix, provided below, highlights the topics identified as being relevant and sets them in relation to the strategic pillars of Iren Group, intersecting them with the topics indicated in Italian Legislative Decree 254/2016 and with the additional topics held to be relevant by the Group and its stakeholders.



## MATERIALITY MATRIX



### Pillars of the Iren Business Plan

- customers
- development
- efficiency
- environmental sustainability
- people

### Topics of Legislative Decree 254/2016

- environmental
- social

### Other relevant topics



The relevant topics are reported within the chapters of the Sustainability Report/NFR. In order to guide the reading of the document, the material topics covered are indicated at the beginning of each chapter.

For each topic in the matrix, the materiality connotations for Iren Group and its stakeholders are highlighted below.

#### Economic development and value for local areas

This is a cornerstone of Iren Group strategy, which aims to guarantee the creation of value for shareholders and for all stakeholders. The economic development of the Group is crucial for growth and competitiveness, as well as for the significant economic, social and environmental impacts that it generates for communities in terms of the distributed added value, job creation, investments in the local area, returns and resource generation for Local Administrations.

#### Competitiveness

The Group's development is influenced by its ability to compete on the market. Therefore, its growth strategy heavily focuses on customers and the development of new integrated services in order to anticipate responses to market trends, with great attention to personnel skills as well as the efficiency and effectiveness of processes. Technological innovation, the sustainability of resources and energy transition and digitisation are the main drivers that Iren Group uses to compete on the market and increase its market share.

#### Innovation and smart city

Iren Group is focused on an open and operational innovation model that is applicable to all businesses. The aim is to improve service quality, building relationships between material infrastructures and human capital, both intellectual and social, thanks to the use of new technologies in communication, mobility, environment and energy efficiency, in order to improve quality of life and meet the needs of



residents, companies and institutions. All actions are strongly focused upon the local areas in which the Group works, collaborating with Local Communities to develop smart cities.



### Efficient and reliable services

Improving the efficiency of all services is important both in terms of the quality offered to customers/residents and to ensure the proper use of resources, the reduction of energy consumption and environmental impacts, as well as reducing the operating expenses of Iren Group. Continuity and reliability of service are constantly strived for, not merely to comply with legislation, but also on a voluntary basis.



### Energy efficiency, renewable sources and district heating

These form the cornerstones of Iren Group's energy policy. The Group has defined important objectives in its development plan to conserve natural resources, in particular energy resources, and reduce greenhouse gases, thanks to the extension of district heating and to a production capacity of which around 80% derives from renewables and other similar sources. Moreover, with the use of technologies and the implementation of innovative processes, Iren is committed to guaranteeing high levels of energy efficiency in the management of its activities and for the local areas in which it operates.



### Sustainable use of water resources

The efficient use and protection of water resources are issues of great importance for Iren Group, both in its production process and in its management of the integrated water services for millions of residents. That is why the Group has defined objectives regarding the quantity of water resources withdrawn and the quality of waste returned to the environment in its development plan, key factors for sustainable management.



### Emissions

Within its strategic guidelines, Iren Group has defined objectives to guarantee a steady reduction of its atmospheric emissions by using "clean sources" of energy generation and by applying the best technologies available and the most controlled processes in the productive cycles. The Group is particularly focused on controlling CO<sub>2</sub> through emission reduction and the increase of avoided emissions by using renewable sources, district heating and obtaining energy from waste.



### Circular economy: management, separated waste collection and reuse of waste

Responsible management allows waste to be used as a resource and in energy production, reducing the need for disposal, the consumption of natural resources and the production of emissions. Iren Group manages its own waste and that of local communities

following the principles of prevention, sustainability and safety in an approach aimed at ensuring effectiveness and at maintaining low costs. Dialogue and a constant flow of information on this topic with Institutions and residents is essential, as is training provided in collaboration with schools and universities.



### Responsible management of business segments

Iren Group invests and sets objectives to guarantee security, continuity, health and business sustainability, aware of the responsibility that energy and environmental service management entails, for the present and for the future of communities and local areas. The commitment is aimed at developing initiatives and the ability to use the available time, money and resources appropriately, taking the social and environmental impact of business actions into consideration.



### Biodiversity

Protecting biodiversity and habitats is important for Iren Group and it has activated processes of collaboration with Organisations, Institutions and Associations on the topic. The Group also operates in order to guarantee that the activities performed in protected areas are compatible and sustainable for the environment and for the maintenance of its natural balance.



### Employment

In the current economic context, employment is of extreme social importance and represents a crucial factor for Iren Group that sees fundamental capital for growth in its human resources. Maintaining adequate employment levels, skill coverage and development and the quality of employment are essential for pursuing corporate strategies.



### Industrial relations

The topic contributes to creating the best conditions for guaranteeing Iren Group the development of a business model that aims to involve and enhance human resources, in order to increase the efficiency and quality of services and the capacity to address market challenges with efficient and innovative solutions. Therefore, industrial relations must be developed in accordance with a participatory, non-conflictual model, while respecting the various roles.



### Occupational health and safety

Iren works to ensure the health and safety of employees in the performance of their jobs and to improve the work environment, also in order to increase the motivation and engagement of personnel and to guarantee continuity in production processes. Strengthening the culture of prevention and risk assessment represents a constant commitment of the Group.



### **Development of human resources**

The professional growth of human resources is essential for Iren Group in order to anticipate and successfully address the complexities and changes of the market, regulations and technologies. Iren invests to increase its in-house skill portfolio and enhance its human resources using specific policies, methods and tools. Its commitment to discovering, developing and promoting personnel skills is a fundamental part of the agreement between the company and the individual.

### **Corporate welfare and diversity**

One of Iren Group's commitments is the reconciliation of life needs with work needs, improving the quality of the work environment and promoting diversity within the company. The aim is to become a team, to add value to the outcome of individual work and increase a feeling of belonging, creating shared social, cultural, professional and intellectual terrain.

### **Human rights**

Iren Group considers the UN's Universal Declaration of Human Rights, the International Labour Conventions and Recommendations issued by the ILO and the Earth Charter to be fundamental points in the definition of its values. The Group condemns any kind of discrimination. Personnel must always behave respectfully towards others with whom they come into contact when working, treating everyone fairly and with dignity. The suppliers' system is managed with same principles and is constantly monitored on these aspects, too.

### **Service levels offered and customer focus**

Service quality and attention to individuals are key elements to satisfying customers and to successfully competing on the market. The ability to deliver high quality levels and innovative services to respond to new and emerging customer demands represents a guarantee for long-term development. Iren Group's mission is to offer its customers and areas the best integrated management of energy, water and environmental resources, with innovative and sustainable solutions in order to produce value over time.

### **Marketing policies**

Innovative offers are changing Iren's role, shifting it from simple energy supplier to an expert in services with elevated added value. Simultaneously, the promotion of innovative offers and services increases customer satisfaction levels, reinforcing loyalty. Innovation, agility and smartness are the Group's objectives for improving its relationship with its customers.

### **Development of local communities**

This is one of the pillars of growth for Iren Group, which identifies the focus for progress and the creation of shared value in the current and future local areas of reference. Improving people's quality of life, making businesses more competitive, looking to the growth of local areas through the eyes of change and merging development and sustainability within a single value. Iren Group's vision is to make this future a reality.

### **Environmental education**

Iren Group believes that education is the most effective and strategic way to consolidate a culture of sustainability and innovation. Informed residents contribute significantly through their consumption choices and behaviour to improve the social and environmental impact of services, even by directing them towards new strategies. That is why Iren invests in its relationships with schools and universities to prepare for the future.

### **Dialogue with Public Authorities**

Relations and dialogue with Public Authorities, and more in general, with local politicians, play a critical role for the activities of the Group and for addressing and outlining governance strategies in relation to energy and the environment, producing impacts for local areas and for the entire country that are increasingly efficient and sustainable. Dialogue is therefore constant, in line with respective roles.

### **Fight against corruption**

Iren Group plays an important role in terms of entrepreneurship and corporate responsibility. In order to prevent and fight corruption, it has adopted an organisational model and a Code of Ethics with guidelines, procedures and rules of conduct. Training and raising the awareness of personnel are the keys to consolidating an ethical culture of business relationships that can tangibly influence the Group's development opportunities.

### **Emergency management**

The prompt and proper management of critical situations or natural disasters is fundamental for guaranteeing safety and support to communities, also during events that fall outside the operational context of Iren Group. In line with this principle, Iren has provided support during natural disasters in Italy.

### **Construction sites management**

The topic is relevant due to its social and safety implications for stakeholders: workers, residents and Local Bodies. Guaranteeing the safety of workers and communities lies at the heart of the Group's operating strategies, as does the commitment to reducing the impact of construction sites to a minimum.



### Compliance with laws and regulations

Proactive management of compliance, through monitoring and debate with Regulatory Authorities, is essential for Iren Group to anticipate scenarios and regulatory changes, as well as to carry out an effective assessment of risks. Through a proactive approach, Iren Group also helps to improve the regulatory framework of the energy and environment sectors.



### Internal and external communication

The knowledge of the mission, values, policies and sustainable growth objectives of Iren Group, together with the capacity to listen, are crucial for the true involvement of human resources in developmental challenges. External communication is the primary vehicle for relations and transparency with stakeholders in order to provide information on the economic, environmental and social impacts of the Group in a prompt and timely manner.



### Sustainable management of the supply chain

The objective of Iren Group is to build proper and transparent relationships with suppliers, which are based on clear rules and shared values. Shared values and a system of engagement rules are key to maintaining the quality of service levels, environmental protection and safety of workers and communities. The Group considers enhancing categories of suppliers that guarantee jobs for disadvantaged people to be important and consistent with its mission.



### Impacts on local areas (suppliers)

The impact that Iren Group has on the local area – in social, economic and environmental terms – is due to the contribution of every employee and the involvement of other stakeholders: colleagues, customers, suppliers, shareholders and the local community. The contribution of all participants in the processes is essential, both as employees and suppliers, to guarantee positive outcomes that contribute to growth and local development.







Furthermore, as shown in the table below, the material topics for the Iren Group are influenced by the Sustainable Development Goals (SDGs) set by the UN for 2030. For certain SDGs, the Group

has defined specific objectives and targets in its 2022 Business Plan, which are described in more detail on page 35.

UN Goals 2030	Significant topics for IREN
1_End Poverty	Service levels offered, customer focus and changes in customer expectations
2_End global hunger	Value and economic development for local areas
3_Ensure healthy lives	Occupational health and safety - Management of construction sites - Management of emergencies
4. Quality education	Environmental education - Development of human resources
5_ Gender equality	Corporate welfare and diversity
6_Clean water and sanitation	Sustainable use of water resources Service levels offered, customer focus and changes in customer expectations
7_Renewable energy	Energy efficiency, renewable sources and district heating Service levels offered, customer focus and changes in customer expectations
8_Full and productive employment and economic growth	Employment Industrial relations Development of human resources Corporate welfare and diversity Occupational health and safety Value and economic development for local areas Competitiveness on the market Sustainable management of the supply chain Impacts on local areas (suppliers) Human rights
9_Innovation and infrastructure	Innovation and smart cities Management of construction sites
10_Reduce inequality	Corporate welfare and diversity Human rights
11_Sustainable cities and communities	Efficient and reliable services Responsible management of business segments Development of local communities Service levels offered, customer focus and changes in customer expectations Management of emergencies Marketing policies
12_Responsible consumption	Efficient and reliable services Energy efficiency, renewable sources and district heating Circular economy: management, separated waste collection and reuse of waste Responsible management of business segments
13_Combat climate change	Emissions Circular economy: management, separated waste collection and reuse of waste Energy efficiency, renewable sources and district heating Responsible management of business segments
14_Aquatic flora and fauna	Biodiversity
15_Terrestrial flora and fauna	Biodiversity
16_Peace and justice	Compliance with laws and regulations Fight against corruption Internal and external communication Dialogue with Public Authorities
17_Partnerships to reach goals	Development of local communities Dialogue with Public Authorities

# The Iren Group





## ABOUT US

Iren, a multi-utility company listed on the Italian Stock Exchange, operates in the following business areas: electricity (production, distribution and sale), district heating (production, distribution and sale), gas (distribution and sale), integrated water service management, environmental services (waste collection and disposal) and services for the local authorities. Iren, which has provided services to the community for over 100 years, is structured as an industrial holding with its main corporate offices in Reggio Emilia and its operating units in Genoa, Parma, Piacenza and Turin, and with four business units, each overseeing a specific line of business:

- **Networks**, focusing on the integrated water service, gas distribution, electricity distribution, public street lighting and traffic light systems;
- **Environment**, dealing with waste collection, urban hygiene, the design and management of waste treatment and disposal plants, and the renewable energy sector;
- **Energy**, regarding electricity and heat production, management of district heating and technological services;
- **Market**, operating in the field of procurement and sale of electricity, gas and heat for district heating.

The structure of the Group aims to strengthen its local presence and the integration of the various business segments. In the last three years, the Group has implemented a reorganisation plan of its subsidiaries, which has led to a reduction in their number through the merging and unification of activities with the same operating characteristics and their position within the business units.

Measures taken to strengthen corporate governance unity and centralisation and operational efficiency and integration continued in 2017, also in view of the development goals outlined in the 2022 Business Plan.

*The Group contributes to the growth of the local territories in which it operates, tangibly promoting economic development and innovation*

Iren focuses on providing services and creating infrastructure to improve and enhance local territories, in full respect for the environment and its customers.

*The Group operates in a multi-regional area with around 6,300 employees, a portfolio of over 1.7 million customers in the energy sector, 2.6 million residents served by the integrated water service and over 2 million residents within its environmental services*

## IMPORTANT EVENTS IN 2017

- On 28 March 2017, Iren signed a loan agreement with the European Investment Bank (EIB) for 75 million Euro, to be used in several instalments, with a duration of 15 years. This funding is intended to support both Ireti's investment plan for electricity network development and modernisation projects with characteristics of environmental sustainability, and related research and development activities;
- on 16 May 2017, the deed of merger for GEA Commerciale within Salerno Energia Vendite was signed, with the subsequent full consolidation of the latter;
- on 17 October 2017, the issue of a Green Bond was concluded, bringing significant optimisation work on the Group's financial profile to a close. The placement of bonds, for the total amount of 500 million Euro within the framework of the 2.0 billion Euro EMTN (Euro Medium Term Notes) Programme as renewed and increased by the Board of Directors on 26 September 2017, on the regulated market of the Irish Stock Exchange. The transaction recorded a total demand of 2.2 billion Euro (subscription 4 times higher than the amount offered) with high quality investors featuring broad geographical diversification;
- on 20 December 2017, the Iren Board of Directors approved the conversion of the 18,192,549 savings shares owned by FCT Holding into Iren ordinary shares due to conversion requests received from the Company itself;
- on 20 December 2017, the Fitch agency disclosed that it had assigned Iren Group the BBB rating with a stable outlook, improving the opinion of BBB- given in 2015 and confirmed in 2016 by one notch. Fitch also confirmed the BBB rating for senior unsecured emissions;
- on 29 December 2017, Iren signed an investment agreement with Acam S.p.A. and the 26 public shareholders of Acam that make up 91.3% of its share capital. This transaction, which aims at the aggregation with Acam Group, will enhance the licence portfolio of Iren Group, consolidating its position in the integrated water service and environmental services. Acam Group manages the integrated water service, the integrated waste cycle, heat and the production of energy from renewable sources in the province of La Spezia.



STRUCTURE OF IREN GROUP AS AT 31/12/2017



Business Unit  
ENERGY



- Valle Dora Energia 49%

Business Unit  
MARKET



- Salerno Energia Vendite 50%
- OLT Offshore LNG Toscana 46.79%

Business Unit  
ENVIRONMENT



- AMIAT V. 93.06% (which holds 80% of AMIAT)
- Bonifica Autocisterne 51%
- Monte Querce 60%
- REI 100%
- TRM Holding 100% (which holds 51% of TRM V.)
- TRM V. 49% (which holds 80% of TRM)
- Iren Rinnovabili 70% which holds:
  - 100% of Greensource (which holds 100% of Enia Solaris and Varsi Fotovoltaico)
  - BI Energia 47.5%
  - Studio Alfa 86% (which holds 51% of Coin Consultech)

Business Unit  
NETWORKS



- ASM Vercelli 59.97% (which holds 100% of Atena Trading)
- Consorzio GPO 62.35%
- Iren Laboratori 90.89%
- Iren Acqua 60% (which holds 66.55% of Iren Acqua Tigullio, 49% of AM.TER. and 100% of Immobiliare delle Fabbriche)

Main subsidiary companies

Unconsolidated companies considered to be relevant in regard to sustainability are indicated in grey and italics and are reported separately within this Sustainability Report, with reference to the impacts that most affect them.



## MAIN AREAS SERVED



# BUSINESS SEGMENTS

	Energy services	Water cycle systems	Environmental services
<b>Retail and business customers</b>	1,783,400 (electricity and gas)		
<b>Citizens served</b>	871,000 (district heating)	2,640,754	2,096,232
<b>Volumes</b>	Electricity <ul style="list-style-type: none"> <li>• produced: 9,033 GWh</li> <li>• sold: 15,921 GWh</li> <li>• distributed: 4,248 GWh</li> </ul> Gas <ul style="list-style-type: none"> <li>• sold: 2,872 million cubic metres</li> <li>• distributed: 1,289 million cubic metres</li> </ul> Heat <ul style="list-style-type: none"> <li>• produced: 2,996 GWh</li> <li>• sold: 2,409 GWh</li> <li>• volume served: 87.1 million cubic metres</li> </ul>	Water sold: 181 million cubic metres	Waste treated: 2,016 million tonnes
<b>Networks and plants</b>	26 hydroelectric plants 8 thermoelectric cogeneration plants 1 thermoelectric plant 3 waste-to-energy plants 3 landfills (post operation) 3 biogas 9 photovoltaic  Distribution networks <ul style="list-style-type: none"> <li>• Electricity: 7,654 km</li> <li>• Gas: 7,984 km</li> <li>• District heating: 923 km</li> </ul>	1,171 treatment plants  Water mains network: 18,954 km Sewage systems: 10,393 km	3 waste-to-energy plants 2 landfills 20 treatment, selection, storage and recovery plants  145 waste collection points

## PRODUCTION OF ELECTRICAL AND THERMAL ENERGY

Iren Group's installed capacity totals over 2,840 MWe (in electricity mode) and over 2,400 MWt of heat production capacity.

In 2017, Iren Group produced around 9,033 GWh of electricity and around 3,000 GWh of heat.

Electricity produced by plants fuelled by environmentally friendly sources (renewable or similar) represents about 86% of the overall production of the Group, compared to the national average which stands at 37%.

Plants fuelled by environmentally friendly sources account for about 70% of the total and play an important role in protecting the environment, reducing the emission of pollutants and the use of other forms of production with a higher environmental impact.

Iren has 9 photovoltaic plants for a total installed output of 0.3 MW and electricity production that in 2017 was around 185 MWh.



## MARKET

Iren Mercato is the Group company that operates in the sale of electricity, gas and heat for the district heating of extra-commodity services and products for energy efficiency in particular.

Iren Mercato is present throughout Italy, with a greater concentration of customers in the central-northern areas. Following on from the acquisitions of Atena Trading and Salerno Energia Vendite, sales were extended to the provinces of Vercelli, Salerno and Grosseto in 2017.



The main sources available for Iren Mercato operations are the thermoelectric and hydroelectric plants of the Group.

#### SALE OF NATURAL GAS

The amount of natural gas procured in 2017 came to approximately 2,872 million cubic metres, of which approximately 1,134 million cubic metres were sold to end customers, 1,530 million cubic metres were used within the Group – for producing electricity and thermal energy, as well as for supplying heating services – whilst 208 million cubic metres of gas remained in storage.

At 31 December 2017, the number of retail gas customers managed by Iren Mercato came to approximately 896,950 (429,150 in the protected market and 467,800 in the free market), distributed mainly across Liguria, Piedmont, the provinces of Parma, Piacenza, Reggio Emilia, Modena and in the Grosseto area.

#### SALE OF ELECTRICITY

The volumes of electricity sold in 2017 amounted to 15,921 GWh. At the end of 2017, the number of retail electricity customers managed came to approximately 820,450 (571,450 on the free market and 249,000 on the protected market), mainly distributed in Turin and Parma where the Group also acts as the “protected market” service operator, and the other areas in which the Group operates.

Below is a cluster analysis of the end customers:

- Free market and Power Exchange - Total volumes sold to end customers and wholesalers amounted to 8,344 GWh, while the volumes used on the Power Exchange amounted to 6,226 GWh on the day ahead market and around 823 GWh on the forward market.
- Protected market - Total volumes sold to customers in the protected market amounted to 528 GWh.

#### SALE OF HEAT FOR DISTRICT HEATING

Through its cogeneration plants and transport networks, Iren Group supplies its customers with the thermal energy required for heating rooms and producing hot water. By choosing district heating, customers help to protect the environment with low running costs, greater reliability and safety compared to traditional heating plants.

Iren Mercato sells thermal energy in the municipalities of Turin, Nichelino, Genoa, Reggio Emilia, Piacenza and Parma. In 2017, commercial development of the customer base continued in Turin, both in new network extension areas (North Turin area) and in the areas already reached by the service (saturation areas). The Group also won the tender for the concession to install the network in the Municipality of Beinasco. The consolidation and increase of the volumes connected also continued in the Emilia area: authorisation procedures were concluded for beginning commercial activities connected with the renewal of the authorisation for the waste-to-energy plant in Piacenza.

Over 2,409 GWht of heat were sold. The thermal energy acquired by third parties amounted to approximately 20 GWht.

#### MARKETING OF ENVIRONMENTAL CERTIFICATES

In 2017, just over 2.8 million CO<sub>2</sub> allowances (EUA) were purchased in order to meet the obligations provided for in the Emissions Trading Scheme (ETS) legislation related to emissions generated by Iren Group plants.

Approximately 228,000 Energy efficiency bonds (EEB) were also purchased at the average price of 259.09 Euro/EEB in order to meet the annulment obligations provided annually for the distributor Ireti.



#### GAS DISTRIBUTION

The distribution service guarantees the withdrawal of natural gas from Snam Rete Gas pipelines and its transportation through local gas pipeline networks for delivery to end users.

Gas distribution activities are carried out by Iren Group in compliance with the rules of functional separation for companies vertically integrated into the sector with the aim of promoting competition, efficiency and adequate levels of quality in the delivery of service.

In 2017, the Group distributed around 1,289 million m<sup>3</sup> of natural gas to 742,327 customers in 91 municipalities through 7,984 km of network.

Local Area	km of network	End customers	Distributed gas (million m <sup>3</sup> )
Emilia-Romagna	5,963	395,530	886
Liguria	1,686	318,918	351
Piedmont	335	27,879	52

The use of innovative technologies for laying and maintaining the networks means that ordinary maintenance can be performed while reducing time frames and costs, and limiting inconvenience to residents to a minimum. Security is guaranteed via remote control systems, a 24-hour emergency service, the cathodic protection of the steel networks, the use of odourised gas and regular and scheduled inspection of the network.

Iren Group also deals with the distribution and sale of LPG. In the Emilian area in particular it does so via 14 delivery plants located in a few mountainous municipalities within the province of Reggio Emilia. The suppliers deliver already odourised LPG in tanks, and the Group distributes it to customers at a pressure of 30 mbar.



## ELECTRICITY DISTRIBUTION

Iren Group, with 7,654 km of networks (high, medium and low voltage), distributes electricity to the cities of Turin, Parma and Vercelli for a total of 853,551 customers.

In 2017, it distributed a total of 4,248 GWh of electricity, 3,149 GWh of which in Turin and 915 GWh in Parma and 184 GWh in Vercelli.



## DISTRICT HEATING

At the end of 2017, Group district-heating volumes were 87.1 million cubic metres, for an estimated population of approximately 871,000 inhabitants.

Area	km of network	Volume (million m <sup>3</sup> )	Residents served
Turin	568	62.4	624,000
Reggio Emilia	220	13.5	135,000
Parma	102	5.9	59,000
Piacenza	23	1.7	17,000
Genoa	10	3.6	36,000
<b>Total</b>	<b>923</b>	<b>87.1</b>	<b>871,000</b>

The Turin district heating network is the most extensive in Italy.

## INTEGRATED WATER SERVICE

The integrated water service includes the procurement and distribution of drinking water, management of the sewage systems and water treatment activities.

With 18,954 km of aqueduct networks, 10,393 km of sewage systems and 1,171 water treatment plants, the Group serves 2,640,754 residents in 242 municipalities in the provinces of La Spezia, Genoa, Imperia, Savona, Parma, Piacenza, Reggio Emilia, Aosta, Asti, Cuneo, Novara, Vercelli, Brescia, Mantua, Pavia and Verona.

In 2017, Iren Group supplied to the network approximately 253 million cubic metres of water in the areas managed, of which 181 million cubic metres sold.



## ENVIRONMENTAL SERVICES

The environmental services include the collection and recovery or disposal of solid urban waste or similar and non-hazardous special waste, as well as its transportation to plants belonging to the Group or third parties.

The Group manages environmental health services in the provinces of Piacenza, Parma, Reggio Emilia, Vercelli and in the City of Turin for a total of 145 municipalities, serving 2,096,232 residents.

In 2017, 1,700,000 tonnes of waste were processed, of which approximately 1,208,000 tonnes of urban waste, by means of 18 treatment, selection, storage and recovery plants, 3 waste-to-energy plants (Piacenza, Parma and Turin) and 2 composting plants.

The Group has activated highly structured separated waste collection systems which, partly thanks to the management of 145 equipped ecological stations, have made it possible for the entire area served to achieve results of more than 60% separation.

The non-separated fraction of waste is disposed of in several different ways in order to make the most of it as a resource, reducing the amounts destined for waste-to-energy conversion and disposal in landfills.

The environmental services also include street-cleaning, sweeping of pavements and urban green areas and the clearing of snow.

## OTHER SERVICES

The Group provides the City of Turin with the management of heating (about 800 buildings) and electric services in municipal buildings and the global technological service for buildings of public interest. In the area of technological services, the Group manages the public street lighting services of the cities of Turin, Alba (within a temporary association of companies with Egea Alba), Asti (through its subsidiary Asti Energie e Calore) and of 11 municipalities in the Biella area in the form of a consortium with Consorzio Enerbit. In Turin the Group also manages the city's traffic lights. In 2017 project financing proposals were presented for public street lighting and traffic light systems in Fidenza, Novara, Cuneo and Moncalieri. Participation in the tender called



by the Municipality of Livorno for the management of public street lighting systems also moved ahead.

The Group's telecommunications network extends over the Turin area and from the ridge of the Susa Valley to Susa. Thanks to the possibility of accessing the networks of the Province of Turin and a local consortium, the Group's network can easily extend to points in the Piedmont provinces and to Milano Caldera, the Italian Internet bandwidth exchange point. Services can be delivered across all of Italy via wholesale and mobile services purchased from other operators, also thanks to a direct connection with the plants of the main national and international operators. Within the City of Turin the optic fibre network extends for almost 200 km and connects over 400 customer sites, including the Group's main sites where it is used, specifically, to monitor and remote control district heating, electricity distribution, public street lighting and for the data collection system for electricity meters and apartment buildings with district heating. Various passage points for restricted traffic areas (ZTL), traffic light regulators and the remote control of the water network are also managed through the Group's network. The network reaches Genoa, Parma, Piacenza and Reggio Emilia, through a redundant 10 Gbps infrastructure dedicated to the Group.



## COMPANIES REPORTED SEPARATELY

### IREN RINNOVABILI GROUP

Iren Rinnovabili operates within the sector of energy efficiency and – directly or via subsidiaries – energy production from renewable sources, and also develops projects and systems in the photovoltaic, hydroelectric, biomass and wind sectors.

Company	No. of plants	MWh produced in 2017	Installed power (MW)
Iren Rinnovabili	1	4,815	1.00
Greensource	49	4,491	3.97
Enia Solaris	5	7,370	5.00
Varsi Fotovoltaico	18	9,462	8.37
BI Energia (*)	1	0	1.00

(\*) outside the perimeter.

Iren Rinnovabili is also active in energy efficiency consultancy, with the aim of bringing together production and business

strategies with the need to protect and enhance environmental resources, as well as in the research and development segment. An established ESCO, it is certified pursuant to UNI CEI 11352:2014 regulations.

The company has 12 employees (2 of whom are women), including an Expert in Energy Management certified pursuant to UNI CEI 11339:2009.

Through its subsidiaries Studio Alfa and Coin Consultech, Iren Rinnovabili Group provides consultancy and laboratory services.

**Studio Alfa** has over 3,000 customers and operates in the following areas:

- laboratory analysis in the environmental sector (solids, liquids, waste, atmospheric emissions, air, asbestos and food);
- consultancy in the sectors of occupational safety, systems and goods, the environment, energy efficiency, the certification of management systems, hygiene and food safety;
- project & engineering aimed at identifying solutions for companies in the field design and construction for plants with severe environmental impact.

The company has 123 employees (of whom 40 are women) and holds the certification ISO 9001, SR-10 (Corporate Responsibility Management System) and the Ecolabel. The Studio Alfa laboratory is ISO 9001 certified, is included on the list of Accredia ISO/IEC 17025 accredited laboratories, is enrolled on the Emilia Romagna Region register of laboratories authorised to carry out analysis within self-control procedures for food companies valid across the whole of Italy, is certified by the Ministry of Health and by ISPESL (Italian Institute for Industrial Safety and Accident Prevention) as a laboratory approved to carry out analysis on asbestos fibres and is registered on the Italian National Registry of Environmental Management in Category 9 (site reclamation) class D.

**Coin Consultech** works with CAD planning and design, FEM calculations, electrical planning, provides regulatory and document assistance to companies on occupational safety, explosion risk assessment, fire prevention projects, checks on atmospheric emissions, environmental authorisation practices and offers technical consultancy for legal disputes.

## COMPANIES OUTSIDE THE PERIMETER

### VALLE DORA ENERGIA

With the commissioning of the Iren Group's Pont Ventoux-Susa hydroelectric plant, the local administrations of Chiomonte, Salbertrand, Exilles and Susa expressed their desire to recover the old plants of Chiomonte (1910) and Susa (1923), whose productivity can ensure a contribution of over 30 GWh per year. In this regard, Valle Dora Energia was established in 2010, controlled by 4 municipalities and an investee of Iren Energia, to develop the plants' redevelopment projects. A complex preliminary procedure to obtain concessions and authorisations



for construction and the carrying out of the works came to a positive conclusion in 2016, the year in which the plants were admitted to the ranking by the GSE (Electricity Services Provider) for incentives on the energy produced.

Keeping these plants in operation also ensures important functions of public utility for the local area (protecting irrigation easements, hydro-geological protection and fire prevention service).

In December 2017 preparatory work was begun on the Chiomonte and Susa power plants, without impacting production, which is guaranteed by existing generation machinery that is to be replaced. Unscheduled maintenance and machinery replacement will continue in 2018-2019.

From a management point of view, 2017 was characterised by significant production of almost 60 GWh, with total volumes of water used amounting to 136 million cubic metres. Annual consumption of auxiliary services came to 250 MWh, entirely from renewable sources.

### AM.TER.

AM.TER., established in 1997 by the municipalities of Campo Ligure, Cogoleto, Masone, Mele and Rossiglione together with Iren Acqua, is the company that manages the integrated water service in the area of Ponente in the province of Genoa and in the municipalities of Arenzano and Tiglieto, for a total of 46,000 inhabitants served.

AM.TER. has 16 employees (of whom 1 woman) and provides drinking water from various sources: 103 springs, 14 rivers and 2 wells. The water is treated in 9 treatment plants and 16 disinfection plants distributed over the area of competence.

AM.TER.'s aqueducts feed around 3.9 million cubic metres of drinking water into the network every year for the 7 municipalities served, via a distribution network of approximately 290 km.

AM.TER. manages and monitors 126 km of sewer network and 14 wastewater treatment plants. In particular, the municipal treatment plant of Rossiglione – which has been adapted to European standards after various interventions – deals with the final discharge of the sewage systems of the municipalities of Campo Ligure, Masone and Rossiglione.

AM.TER. has adopted an integrated Quality, Safety and Environment management system that is certified in accordance with ISO 9001, OHSAS 18001 and ISO 14001 standards.

### OLT OFFSHORE LNG TOSCANA

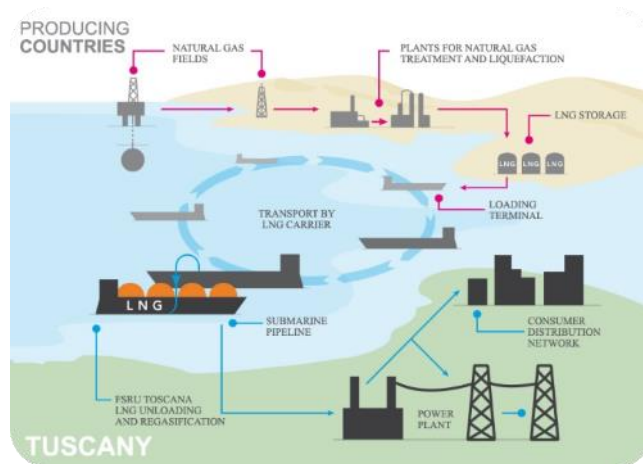
The Company OLT Offshore LNG Toscana was created in 2002 with the aim of planning, constructing and managing the “FSRU Toscana” floating regasification terminal. The company's shares are held by Iren Group (49.07%), Uniper Global Commodities SE (48.24%) and Golar LNG (2.69%).

The OLT regasification plant is one of the main infrastructures of national interest for the secure supply of gas for Italy. The Ministry of Economic Development defined the OLT plant to be an important and necessary infrastructure for the safety of the

National Gas System, which can significantly contribute to lowering the cost and promoting competition in the supplies of natural gas.

The terminal is located around 22 km off the Tuscan coast between Livorno and Pisa and has an authorised regasification capacity equal to 3.75 billion cubic metres per year (amounting to about 4% of the entire national requirement) and a maximum daily regasification capacity of 15 million standard cubic metres. The tanks can store up to around 137,100 cubic metres.

OLT offers its regasification capacity on a multi-year/annual and monthly basis in accordance with the time frames provided in the Regasification Code, in line with the deadlines laid out by current regulation (please note that the “FSRU Toscana” Terminal is infrastructure that is subject to regulation by ARERA, which sets the tariff and operating criteria).



Since 2014 the Ministry of Economic Development (MED) has made allocation measures available for capacity unused by the regasification terminals to the country to prevent emergency situations in gas procurement or to exploit favourable market conditions, in order to reduce the costs for the national gas system, in line with the provisions of the National Energy Strategy. For this purpose, OLT has offered the “peak shaving” service, one of the possible emergency measures established by the MED within the “Emergency Plan”. Through this service, the Terminal makes a discharge slot available to the head of the balancing service for significant quantities of LNG (liquefied natural gas) to be stored in tanks for the entire winter period. In the event of an emergency, OLT must regasify the LNG, on short notice, in order to meet the peak demand that consequently arises. The integrated regasification and storage service is a second service offered, through which OLT, as established by a specific MED Decree and the relative capacity allocation procedure defined by ARERA, makes its slots available, which are not allocated during the spring and summer in order to import loads that will be regasified and sent directly into the national network in order to be stockpiled by the major storage company, STOGIT. This gives importers the possibility to purchase quantities of natural gas that will then be used during the winter, exploiting more favourable market conditions in terms of price that are present during summer on the LNG spot market.



## PLANT OPERATION

The regasification process takes place through the following steps:

- unloading LNG off the LNG carriers and storing it in the four tanks of the regasification plant;
- regasifying LNG to return it to the gaseous state by means of an increase in temperature;
- compressing the gas to the national grid.

The “FSRU Toscana” regasification plant was built using secure, consolidated technologies and subsystems and components that have been used for some time in the various sectors of the oil and gas industry.

OLT has undertaken voluntary reporting and certification of its activities. All the obligations set out in the Health, Safety, Environmental and Quality Policy (HSEQ) are defined in the Integrated Management System adopted by OLT in accordance with the standards of ISO 9001 (Quality), ISO 14001 (Environment), OHSAS 18001 (Health and Safety) and SA 8000 (Corporate Responsibility).

The requirements of these standards and the annual objectives set by the Company within the framework of continuous improvement are successfully implemented thanks to the collaboration and involvement of all personnel, who have been appropriately trained and are constantly kept up-to-date.

In order to ensure management that is completely in line with the Quality, Safety and Environment Standards, OLT asked its main outsourcer, ECOS, which is responsible for the operative management and crewing of the Terminal, to implement an appropriate Management System. By implementing the Integrated Management System, ECOS obtained the ISO 9001, ISO 14001 and OHSAS 18001 certifications.

In 2017, OLT started the process for EMAS registration.

During the five years of activity in which the “peak shaving” service was offered (2013-2017), OLT provided the national system with about 480,000 cubic metres of LNG overall, while during the two years that the integrated regasification and storage service was active (2016-2017), OLT awarded 15 discharge slots, via auction, for a total of around 2,130,000 cubic metres of LNG. Meanwhile, the Company continued to offer regasification capacity on a multi-annual, annual and monthly basis, in accordance with the regulations in force.

From 2014 to 2017, a gradual increase in the use of the terminal was recorded, reaching an allocated capacity of 24% in 2017. “FSRU Toscana” demonstrates operative flexibility, in terms of acceptable gas specifications, receiving loads from North and South America, Africa and the Middle East, as well as from Europe, and in terms of size of acceptable gas carriers, unloading carriers with capacities between 125,000 and 156,000 liquid cubic metres, with the possibility of accepting carriers ranging in size up to the “new panamax” class (180,000 liquid cubic metres), with a receptive potential that comes to around 90% of the world fleet.

## ENVIRONMENTAL PERFORMANCE

The terminal operates in compliance with the IEA Decree (no. 93 of 15 March 2013), that provides for the continuous monitoring of channelled emissions coming from the two boilers needed for regasification, as well as continuous monitoring of the discharge necessary for regasification. The main environmental performances of the terminal are shown in the table below.

	unit of measure	2017 Data	Authorised limit
<b>Water</b>			
Use of seawater	Million m <sup>3</sup>	107	141
Free available chlorine discharge	t	1.96	3.60
<b>Energy</b>			
Production of electricity	MWh	46,007	--
Electricity consumption	MWh	46,007	--
<b>Waste produced</b>			
Non-hazardous	t	3,548	--
Hazardous	t	1,342	--
<b>Boiler emissions (*)</b>			
		<b>max qty</b>	
NO <sub>x</sub>	mg/Nm <sup>3</sup>	36.56	69.45
CO	mg/Nm <sup>3</sup>	1.25	31.41
Particulates	mg/Nm <sup>3</sup>	0.10	2.91
NO <sub>2</sub>	mg/Nm <sup>3</sup>	3.07	-
VOC	mg/Nm <sup>3</sup>	23.12	-

(\*) values expressed in mg/Nm<sup>3</sup> at 3% of oxygen.

For the discharges from the terminal, which differ from those required for regasification given in the previous table, a quantity of free available chlorine of 0.2 mg/l is authorised. These were monitored, as required by the IEA Decree, both by internal personnel and by a certified laboratory and revealed values well below the legal limits.

70,622.21 tonnes of CO<sub>2</sub> were emitted by the terminal in 2017 (calculated considering channelled emissions, fugitive emissions and controlled methane emissions during maintenance, appropriately converted into CO<sub>2</sub> equivalent).

### Impact on biodiversity and on marine ecosystems

The Environmental Impact Assessment (EIA) requires, for the entire operating period of the terminal, a “Monitoring Plan of the Marine Environment” which provides for the performance of four monitoring campaigns a year of a chemical-physical, biological and eco-toxicological nature relative to the water column, sediments, the biological environment, the measurement of underwater noise and morphology of the sea bed. The campaigns performed before the arrival of the terminal and at the end of the first four years of operation have not shown any impact on biodiversity or marine ecosystems. Specifically the noise level of the terminal measured experimentally while in operation (60 dB at 100 m from the terminal) appears significantly lower than estimated in the design analyses and authorised by the relative EIA Ruling. Overall, no substantial variations in the concentrations of contaminants in the water column or sediments were found.

This finding is in line with the bio-accumulation studies conducted on mussels (bio-indicators) placed in the sea in special cages lowered from the Terminal, which showed no particular cellular or physiological damage or accumulation of contaminants. The aforementioned investigations were conducted by the “G. Bacci” Inter-University Applied Marine Biology and Ecology Centre in Livorno.

### **SOCIAL PERFORMANCE**

OLT Offshore LNG Toscana, in line with the policy of its reference shareholders, proposes to manage its industrial initiative responsibly with regards to the local area.

#### **Employment**

The plant has made an important contribution to local employment. 123 employees have regular jobs, 21 of which directly in OLT and indirectly a further 63 people at ECOS, the Company managing the terminal and 39 people at F.lli Neri, the Company handling the marine vessels serving the terminal.

#### **Economic outcomes**

From a purely economic point of view, OLT’s industrial initiative ensures important opportunities for the municipalities affected by the presence of this infrastructure. Specifically, the economic outcomes at a local level are estimated at around 400 million Euro over the 20 years of the plant’s life cycle, starting from 2013, an amount that includes a series of specific activities: the management and maintenance of the terminal, the surveillance system, direct employment, non-core services and those connected to environmental protection.

#### **Environmental compensation in the area**

A crucial aspect of the socio-economic collaboration between OLT and the local area lies in the initiatives for the communities, both those that have been implemented and those being finalised. Specifically, with the municipalities of Livorno, Collesalveti and Pisa, OLT has come to an agreement for the construction of works for 1 million Euro, including the contribution for building the Visitor Centre of the Marine Reserve “Secche della Meloria”, the funding of the environmental requalification of the town centre of Stagno and the realisation of a park with facilities in the public

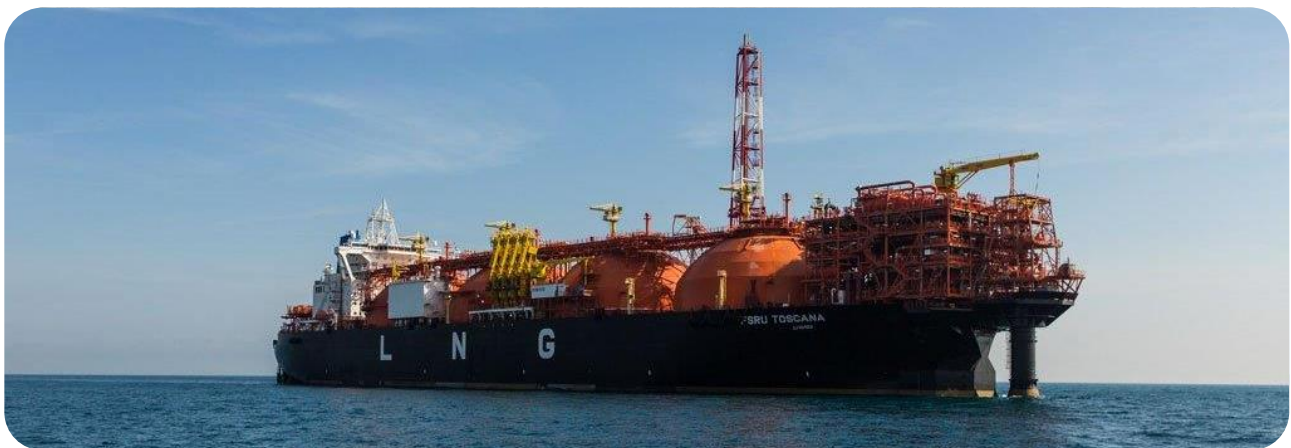
area “La Camilla” in Marina di Pisa. Additional compensation was given to the Municipality of Livorno, for a total of 2.5 million Euro that was assigned by the Region of Tuscany for the implementation of door-to-door waste collection service. The OLT has agreed with the Municipality of Pisa to reopen the Incile Canal, the connection between the Arno river and the Navicelli canal to restore navigation from the centre of Pisa to the port of Livorno. The project is almost complete, with an auction-based total value of the works of around 4.8 million Euro. Lastly, with the Municipality of Collesalveti, OLT has directly agreed and co-financed the project to open a separated waste collection centre in the district of Stagno for a maximum amount of 100,000 Euro.

#### **Social initiatives**

OLT is present in the local area, supporting initiatives that promote the social and industrial fabric, demonstrating the company’s desire to integrate with the local area and community that host the infrastructure. OLT collaborates with some children’s associations, providing economic support, which include: the paediatric award of the Hospital of Livorno, the “Il Porto dei Piccoli” non-profit association and Assonautica Livorno. OLT sponsors various initiatives for the Municipality of Livorno, including Effetto Venezia, Half Marathon and Palio Marinaro, while it sponsors the “Open Opera” project and supports the creation of a music course in the primary schools for the Municipality of Collesalveti. Its participation in an awareness-raising campaign promoted by the Municipality of Pisa on the topic of safety in the workplace is also of note.

### **IMPROVEMENT STRATEGIES AND COMMITMENT**

Every year OLT evaluates the performance of the Management System and identifies the objectives for the years to come in regard to environmental policy. These objectives, which include the reduction of environmental impacts, are given in specific “objective planning and monitoring” sheets. The annual evaluation of these objectives, during the Management Review, allows for the verification of the implementation and effectiveness of all actions provided within the improvement plans. For 2018, improvement objectives concerning the reduction of NO<sub>x</sub> emissions and the consequent EMAS certification are envisaged.





# CORPORATE GOVERNANCE

## ORGANISATIONAL STRUCTURE OF IREN GROUP



\*Including Mergers & Acquisitions, Planning and Investor Relations

Iren has a traditional governance system, in line with the principles contained in the Code of Conduct for Listed Companies.

## THE IREN BOARD OF DIRECTORS

The Board of Directors (BoD) has full powers for the ordinary and non-recurring administration and for the implementation and achievement of the company business objectives, with the sole exclusion of powers which by Law or by the articles of Association are the responsibility of the Shareholders' Meeting.

The BoD assesses the economic, environmental and social performances of the organisation, any significant risks and opportunities, and its compliance with standards, codes of conduct and the principles declared during the approval of the strategic, business and financial planning documents and the Group's annual budget. The assessment of risks and social and environmental performance is carried out with the support of the Control, Risk and Sustainability Committee. The BoD also examines the Group's socio-environmental performance as illustrated on a yearly basis in the Sustainability Report, which, as of the current accounting period, also constitutes a non-financial report pursuant to Italian Legislative Decree 254/2016.

The Board of Directors of Iren in office as at 31 December 2017 was appointed by the Shareholders' meeting of 9 May 2016 (for three years until approval of the Company's financial statements as at 31 December 2018) and is composed of 13 Members.

The articles of Association regulate the composition, appointment, methods and criteria of presentation of the lists for appointing

Members. The articles of association are such as to guarantee sufficient presence of the less represented gender in the body (in the present mandate this amounts to at least a third of all Directors) and ensure the election of at least one minority Director (Article 147-ter, subsection 3, Consolidated Law on Finance).

Under the terms of the current articles of Association, the BoD delegates its powers to one or more of its members and can also assign powers to the Chairman, Deputy Chairman and CEO, provided they do not conflict with each other. The Delegated Bodies can decide to delegate some of their duties and responsibilities to those working directly under their management and, in specific cases, to other collaborators having proven skills and capacities. Such powers may relate to signatures and expenditure, representative powers, powers relative to health and safety in the workplace, fire prevention and the protection and safeguarding of the environment. The possibility of sub-delegating to lower level managers is also envisaged, on the condition that the Delegated Body is notified in advance.

The BoD has appointed Corporate Social Responsibility matters to the Deputy Chairman, for whom a specific structure was established, overseen by a department Director.

The assessment of the existence of the requirements for independence by Iren Directors is carried out by the BoD after appointment and annually thereafter. This considers both the criteria defined by the Consolidated Law on Finance, as well as the scenarios provided for in application criteria 3.C.1. of the Code of Conduct, and is implemented on the basis of the information provided by the interested parties via periodic self-assessment



questionnaires, filed with the records, or via the declarations given in the minutes, or in any case available to Iren. Evaluation is also made when circumstances regarding independence arise. The Board of Statutory Auditors, within the scope of the tasks assigned to it by law, checks the correct application of the verification criteria and procedures adopted by the BoD to assess the independence of its members and discloses the outcome of the audit to the market in the Corporate Governance Report or in the Auditors' Report to the Shareholders' Meeting. For the purposes of the annual update, during the meeting held on 13 February 2018, the Board of Directors confirmed the assessments previously carried out concerning the existence of independence requirements for 8 Directors (pursuant to article 3 of the Code of Conduct) and ascertained the existence of independence requirements by another Director. Thus, while 8 Directors held the independence requirements as at 31 December 2017, this number is now 9.

As provided for by article 2391 of the Italian Civil Code, Directors that have (personally or on behalf of third parties) an interest in a particular transaction must provide advance notice to the other Directors and the Board of Statutory Auditors, specifying the nature, terms, origin and scope; in the case of the CEO, the latter must also refrain from executing the transaction, appointing the Board of Directors to do so.

Pursuant to article 2391-bis of the Italian Civil Code, the Board of Directors ensures rules for transparency and substantial and procedural correctness in transactions with related parties and discloses them in the Management Report. To this end, it may consider seeking the assistance of an independent expert, depending on the nature, value or characteristics of the transaction. The Board of Statutory Auditors oversees compliance with the adopted rules and refers to them in its Report to the Shareholders' Meeting. Following the favourable opinion of the Committee for Transactions with Related Parties, the Board of Directors adopted the current version of the "Internal Regulation on Transactions with Related Parties" (13 March 2015) and an operating procedure to manage transactions with related parties (15 March 2016). Stakeholders can view any conflicts of interest within the Board of Directors in the annual Report on Corporate Governance and Ownership Structure (pursuant to article 123-bis of the Consolidated Law on Finance).

Directors actively participate in the meetings of the Board of Directors and the Board's Committees, receiving full information on the matters relative to the decisions to be taken. In addition to the many meetings of the BoD, meetings were organised in which the Chief Executive Officer, Business Unit Directors or staff have illustrated, in several stages, the long-term strategic planning process, the draft Business Plan, a number of non-recurring transactions and the Group's major initiatives.

With particular reference to the long-term strategic topics and social, economic and environmental sustainability, an initial cycle of three evocative meetings/dialogue and discussion workshops were held for the Board of Directors and Iren management in which, with the help of respected experts, attention was given to the scenarios that the Group must face in the coming decades.

Special focus was given to the future of electricity generation, the effect of digitisation on new resident behaviour and service suppliers and the new way of perceiving common assets such as water and the environment. The BoD also had the chance to analyse topics of diversity and equal opportunities during a special meeting.

Participation in courses and conferences by the Board of Directors and the members of the Board of Statutory Auditors was also supported and encouraged: a training programme on the tasks and responsibilities inherent to the office of members of the administrative and control bodies of listed companies, in line with the recommendations of the Code of Conduct.

All the aforementioned initiatives were, in different ways, important opportunities to inform, educate and communicate to those present the corporate, economic, social and environmental aspects.

In line with the provisions of the Code of Conduct, at least once a year the BoD carries out a self-assessment of the Board and its committees (Board evaluation), as well as their size and composition. Bearing in mind the recommendations of the Italian Stock Exchange, attention was drawn to the critical areas identified by the Board of Directors at the moment of the Board evaluation, including to assess the efficacy of the corrective and improvement measures launched in 2016 and continued in 2017 following the suggestions made. A constant flow of information is envisaged during each BoD meeting by the Boards' Committees, which guarantees the prompt notification of any critical issues found.

The Board of Directors is committed to creating, strengthening and expanding adequate spaces for listening and dialogue with stakeholders and for this reason, in compliance with the provisions issued by the competent Authorities, ensures the most extensive and prompt circulation of information relevant to its shareholders, institutional investors and intermediaries that work on the financial market, in order to allow the latter to exercise their rights in an informed manner. Within Iren's organisational structure, the Investor Relations department, which reports to the Chief Executive Officer, is tasked with managing shareholder relations and the financial market in general, divulging important information that concerns the Group. Furthermore, starting from 2014, Local Consultation Committees were established as joint channels of dialogue and participatory planning with the stakeholders of local businesses. The Chairman and Deputy Chairman attend the Committees.

Pursuant to article 127-Ter of the Consolidated Law on Finance, shareholders may put forward questions about the items on the agenda, even before the Shareholders' Meeting: after the pertinence of the questions and the legitimacy of the applicant have been verified, the competent bodies will provide the relative response via fax or email or, later, at the Shareholders' Meeting.

Iren's Board of Directors held 20 meetings in 2017. The dates of the meetings for the approval of the interim management reports, half-year report and draft Financial Statement and Consolidated



Financial Statement are shown in the calendar of corporate events, approved by the BoD and published on the website.

*The Iren Group has a traditional governance system, in line with the principles of the Code of Conduct for listed companies issued by the Italian Stock Exchange*

#### COMPOSITION OF THE BOARD OF DIRECTORS AT 31/12/2017

Name and surname	Office	Position (Consolidated Law on Finance)		Position (Italian Stock Exchange's Code of Conduct)	
Paolo Peveraro	Chairman	Executive Director		Executive Director	
Ettore Rocchi	Deputy Chairman	Executive Director		Executive Director	
Vito Massimiliano Bianco	Chief Executive Officer and Central Manager of Operations and Strategy	Executive Director		Executive Director	
Moris Ferretti	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Lorenza Franca Franzino	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Alessandro Ghibellini	Director	Non-Independent	Non-Executive Director <sup>(1)</sup>	Independent Director	Non-Executive
Fabiola Mascardi	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Marco Mezzalama	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Paolo Pietrogrande	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Marta Rocco	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Licia Soncini	Director	Independent Director	Non-Executive	Independent Director	Non-Executive
Isabella Tagliavini	Director	Non-Independent	Non-Executive Director	Non-Independent Director	Non-Executive
Barbara Zanardi	Director	Independent Director	Non-Executive	Independent Director	Non-Executive

<sup>(1)</sup> During the meeting of 13 February 2018, the IREN BoD ascertained that the requirements of independence existed for the Director.

#### REMUNERATION AND APPOINTMENTS COMMITTEE

The Remuneration and Appointments Committee (RAC) is composed of three non-executive Directors, the majority of whom are independent.

The Chairman of the Committee is chosen from among the Independent Directors. At least one member of the Committee has appropriate experience in financial and retribution policies which is assessed by the Board of Directors at the moment of appointment.

The RAC performs the duties concerned with remuneration as provided for by the Code of Conduct (Principle 6.P.4 and Application Criterion 6.C.5) and, specifically, the following proposal and consulting functions towards the Board of Directors:

- periodically assesses the suitability, overall consistency and actual application of the remuneration policy of Directors and Senior Managers with strategic responsibilities, by making use of the information provided by delegated Directors;

- submits proposals on the subject to the Board of Directors;
- presents proposals or expresses opinions to the BoD regarding the remuneration of executive Directors and other Directors with specific office, as well as establishing performance objectives relating to the variable part of said remuneration;
- monitors the application of the decisions adopted by the BoD by verifying, in particular, the actual fulfilment of performance objectives;
- deals with the preliminary activities concerned with preparing the remuneration policy for Executive Directors and Senior Managers with strategic responsibilities of the Group, functional to the adoption of the provisions under the competence of the BoD.

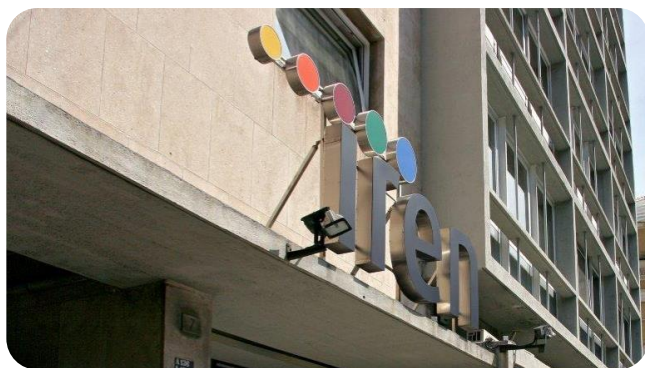
The power to determine the remuneration of the directors holding specific office pursuant to the Company Articles of Association remains in the hands of the Board of Directors, upon approval of the Remuneration Committee and the Board of Statutory Auditors, pursuant to article 21 of the articles of Association in force.



In regard to appointments, the RAC performs the functions referred to in Application Criteria 5.C.1. and 5.C.2. of the Code of Conduct:

- formulates opinions to the BoD in respect of its own size and composition, and makes recommendations on the professional figures whose presence in the Committee is deemed desirable;
- proposes candidates to the BoD for the office of Director in cases of co-opting, where independent Directors need to be replaced, ensuring compliance with the requirements on the minimum number of independent Directors and on the percentages restricted to the less represented gender;
- expresses recommendations to the BoD in relation to the maximum number of appointments that members can take as Director or Statutory Auditor in other listed companies in regulated markets (even foreign), in financial, banking, insurance or relatively large companies, compatible with the efficient performance of the office of company Director, bearing in mind the participation of Directors in the Committees established within the Board, as well as the exceptions to the bans on competition provided for by article 2390 of the Italian Civil Code;
- performs enquiries into preparation of the plan for the succession of executive Directors, if the BoD decides to adopt such a plan.

The RAC is also tasked with supporting the Board of Directors in the annual self-assessment of the Board and its Committees pursuant to the Code of Conduct (Application Criteria 1.C.1, point g) and conducting the preliminary assessment – regarding the decisions of the Board of Directors – of the annual Remuneration Report, to be made available to the public before the annual Shareholders' Meeting called to approve the financial statements.



#### REMUNERATION OF MEMBERS OF THE BOD OF THE PARENT GROUP AND OF SENIOR MANAGERS WITH STRATEGIC RESPONSIBILITIES

The Shareholders' Meeting of Iren decides, at the moment of appointment and for the entire duration of office, the total annual remuneration of the members of the Board of Directors and the maximum total amount for the remuneration of the Directors holding specific offices provided for in the articles of Association.

The BoD decides, on the suggestion of the Remuneration and Appointments Committee and bearing in mind the opinion of the Board of Statutory Auditors, the framework and remuneration of

the Directors holding specific office (Chairman, Deputy Chairman and Chief Executive Officer) and the remuneration for the participation of the Directors in the Committees established within such Board. The Board of Directors also defines the objectives to which the variable annual short term component of the Chief Executive Officer's remuneration is related.

The Chief Executive Officer practically determines, bearing in mind the provisions of the remuneration policy and making use of the support of the Company's Remuneration and Appointments Committee, the remuneration of Senior managers with strategic responsibilities and defines, in particular, the goals to which the variable annual short term component is correlated.

The Remuneration and Appointments Committee may avail itself of external consultants who are experts in retribution policies, checking in advance that they are not in situations which could jeopardise their independence of judgement. The names of any independent experts involved in preparing the remuneration policy must be indicated in the annual Remuneration Report.

The remuneration of non-executive Directors is not related to the economic results achieved but commensurate with the commitment required of each of them, bearing in mind their potential participation in one or more of the Committees within the Board of Directors.

For the Chairman and Deputy Chairman, a fixed remuneration has been established and no performance bonus is envisaged. The Chief Executive Officer participates in the short and long-term incentives system as described in the remuneration report approved by the Shareholders' Meeting.

Generally, without prejudice to compliance with the regulations in force, no indemnity is provided for directorship severance for Iren Directors. For the Chief Executive Officer, who holds a fixed-term management contract, the treatment and severance indemnity established by the national collective labour agreement of reference are provided.

For Senior Managers with strategic responsibilities, the variable part of their remuneration is divided into two parts - short-term and long-term. The first, which upon achievement of all the targets may be as high as 30% of the fixed retribution, is based on an MBO system which takes into consideration objectives that impact various outlooks: from financial to environmental outlooks and from relationships with customers and stakeholders, to the people dimension, in addition to objectives linked to the efficiency raising of governed processes or even those that cut across different businesses. A gate (preliminary to any disbursement) is provided in order to maintain the investment grade attributed by one of the three major Rating Agencies. The objectives for Senior managers with strategic responsibilities, which are always defined in line with horizontal and vertical consistency at a Group level and within individual business units, also form the foundation of the management by objectives (MBO) system used for Senior and Junior managers.

The long-term variable (LTV) remuneration introduced in 2015 is monetary, with annual amounts of up to 25% of the fixed remuneration (upon achieving all the objectives) and is related to achieving two economic objectives (EBITDA and cumulative net



profit) established in the Group's Business Plan for the 2015-2018 period, at the end of which such sums may be disbursed. In addition, the maintenance of the investment grade attributed by one of the three major rating agencies is provided for as a gate.

Claw-back clauses are provided for the regulations of both systems (MBO and LTV).

No entry bonuses or specific incentives at the moment of appointment/taking office are adopted. Severance indemnities and supplementary pensions provided for Senior Managers with strategic responsibilities are those established by law and national collective labour agreements.

Generally, with reference to the Companies within the scope of this Sustainability Report, remuneration for Members of the administrative bodies is determined in compliance with legislation in force and considers the principles resolved by the Iren Shareholders' Meeting on the issue, held on 9 May 2016 (for example, the principle of the prevalent use of Iren's Board of Directors and of employees within the administrative bodies of the companies for which the Group expresses appointment, the principle of all-inclusiveness of remuneration and the principle of obligation to repay).



Iren prepares an annual Remuneration Report which illustrates, among other things, the remuneration policy of members of the Board of Directors and of Senior Managers with strategic responsibilities (please see the First Section of the Report for further information). The Report is, among other things, aimed at increasing the knowledge and awareness of shareholders and, in general, of investors and stakeholders. Before approval by the Board of Directors, the annual Report is examined by the Remuneration and Appointments Committee. The First Section of the Remuneration Report is subject to voting (non-binding) by the Shareholders' Meeting. It is required that the Chairman of the Remuneration and Appointments Committee or other member of the Committee be present at the annual Shareholders' Meeting for approval of the financial statement so as to refer to the shareholders on how the said Committee performs the functions assigned to it. After the Meeting, the Remuneration and Appointments Committee analyses the results of voting on the annual Remuneration report, examines any concerns arising at the Shareholders' Meeting and commences its assessments for reviewing the Remuneration Policy adopted by the Group. The Shareholders' Meeting held on 20 April 2017 resolved to express a favourable opinion on the First Section of the Remuneration Report for 2016, approved by the Board of Directors on 27 March

2017. After the Meeting, the Remuneration and Appointments Committee, in exercising its functions, began to analyse the topic, aiming to improve communication to the market of the remuneration policies adopted by Iren, also in line with the guidelines formulated by the Committee for Corporate Governance within the context of the 5th Report on the application of the Code of Conduct and bearing in mind the new directive on shareholder rights (2017/828/EU). The Committee availed itself of the assistance of the competent Group bodies and of an independent consultant selected following a comparative selection to conduct this analysis.

## CONTROL, RISK AND SUSTAINABILITY COMMITTEE

In view of the importance attributed to corporate social responsibility by Iren Group, the Board of Directors decided to implement the recommendation contained in the Code and resolved to attribute preliminary oversight duties on corporate social responsibility concerning sustainability to the previously established Control and Risk Committee which, as a result of the resolution, took on the name "Control, Risk and Sustainability Committee" (CRSC).

In line with the provisions of the Code of Conduct, the BoD defines the nature and the level of risk compatible with the Group's strategic objectives, evaluating the suitability of the organisational structure with particular reference to the internal control and risk evaluation system. In performing this role, the BoD is assisted by the Control, Risk and Sustainability Committee, which provides a preliminary opinion on the fulfilment of the duties assigned to the latter concerning internal control, risk management and sustainability. The Board of Statutory Auditors also monitors the effectiveness of the internal control and risk management system.

As at 31 December 2017, the CRSC was made up of three Non-Executive Directors, the majority of which independent, with the Chairman chosen from the Independent Directors. At least one member of the Committee has appropriate experience in accounting and finance or risk management (deemed adequate upon their appointment). In line with application criteria 7.C.1 and 7.C.2 of the Code of Conduct and with the additional oversight duties of corporate social responsibility identified by the BoD, the CRSC is attributed the following tasks:

- through suitable preliminary activities, supports the assessments and decisions of the Board relating to the internal control and risk management system, as well as those regarding the approval of the periodic financial reports;
- assesses, together with the Financial Reporting Manager and having consulted with the external auditor and the Board of Statutory Auditors, the proper use of the accounting principles and their consistency for the purpose of drafting the Consolidated Financial Statements;
- expresses opinions on specific aspects relative to identifying the main corporate risks (in particular, specific aspects relative to Risk Policies, the identification of the main company risks and the Audit Plan, as well as regards the

guidelines of the internal control and risk management system);

- examines the periodic reports on the assessment of the internal control and risk management system and those of particular relevance drafted by the Internal Audit department;
- monitors the independence, adequacy, effectiveness and efficiency of the Internal Audit department;
- requests the Internal Audit Department to carry out checks on specific operating areas, providing simultaneous communication to the Chairman of the Board of Statutory Auditors;
- reports to the Board, at least every six months, when the annual and half-year financial report is being approved, on its activities and the adequacy of the internal control and risk management system;
- through suitable preliminary activities, supports the assessments and decisions of the Board of Directors relating to the management of risks arising from detrimental acts of which the Board of Directors has become aware;
- monitors sustainability policies and compliance with the conduct principles adopted by the Company and its subsidiaries;
- examines the guidelines in the sustainability plan and monitors the means of implementation;
- assesses, together with the competent Group Department and having consulted the external auditor, the correct use of the standards adopted in order to draft the non-financial information provided for by the legislations in force;
- monitors the evaluation and improvement system for environmental, economic and social impacts that arose from business activities in the local areas;
- examines the periodic reports on the implementation of the structured comparison measures with stakeholders in the local areas where the Group operates, in particular through Local Committees, and those concerning consistency with CSR issues of cultural activities and promotion of the Group's image.

The BoD of Iren, through the Control, Risk and Sustainability Committee, summons the Risk Management Director at least every six months for the Group risk report. In accordance with the Code of Conduct, the Risk Management Director presents a risk map with the main risks in terms of impact and probability and any mitigating actions, in addition to providing the results of specific analyses. The Group's other control bodies are also summoned to the same meetings. Furthermore, the Group's risk policies are subject to annual update. The body responsible for approving substantial changes is the BoD. Furthermore, the Committee asks Risk Management for a specific risk assessment for specific Group projects. In 2017 the Committee requested that Risk Management conduct a risk assessment of the 2022 Business Plan. M&A transactions evaluated during the year were also subject to detailed analysis.

## COMMITTEE FOR TRANSACTIONS WITH RELATED PARTIES

The Committee for Transactions with Related Parties (CTRP) expresses its opinion on the performance of transactions of lesser and greater importance with Related Parties and, in general, performs all the other functions assigned pursuant to the CONSOB Regulation (no. 17221 of 12 March 2010, as amended) on transactions with related parties. The CTRP is made up of three non-executive Directors in possession of the independence requirements pursuant to the Consolidated Law on Finance and the further requirements provided by the current Code. In order to ensure the dual requirement of independence and non-relation to the individual transaction to be analysed, it is provided for that the CTRP be completed with other Independent Directors present in the BoD that are not related to the individual transaction to be analysed, attributing to the Chairman of the CTRP the task of identifying a sub-committee (the so-called designated members) made up of three Independent Directors not related to the individual transaction with the related party to be analysed. Pursuant to the Internal Regulation on Transactions with Related Parties, it is provided that:

- with respect to transactions of lesser importance, in the event that there is not even an independent and unrelated member of the CTRP, and in the BoD there are no other Directors meeting the necessary requirements to complete the composition of the CTRP, a non-binding supported opinion will be provided by an independent expert appointed by the Chairman of the Committee, upon approval of the Chairman of the Board of Statutory Auditors;
- with respect to transactions of greater importance, in the event that there are not at least three unrelated independent directors, the Chairman of the Committee will designate one or, if possible, two unrelated independent directors; in the event that there are no independent and unrelated directors, such activities will be performed by the Board of Statutory Auditors or by an independent expert appointed by the Chairman of the Committee, upon approval of the Chairman of the Board of Statutory Auditors.

## BOARD OF STATUTORY AUDITORS

The Board of Statutory Auditors in office as at 31 December 2017 was appointed by the Shareholders' Meeting of 28 April 2015 (for three years until approval of the Company's financial statements as at 31 December 2017) and is composed of 3 Standing Auditors and 2 Supplementary Auditors. Articles 28 and 29 of the Company Articles of Association regulate the appointment of the Board of Statutory Auditors through the submission of the lists in order to guarantee a satisfactory presence of the less-represented gender within the body (based on Article 3 of Italian Law 120/2011 and of Implementation Ruling by Italian Presidential Decree 251/2012). The Board's supervisory activities are exercised via:

- the analysis of acquired information and the attendance of the meetings of the governing bodies (including internal committees established by the Board of Directors);





- the exchange of information with Directors and the control bodies of subsidiaries, as well as with other company roles and departments;
- the periodical acquisition of information from Delegated Directors;
- the acquisition and request, also by a single Auditor, of information from the Financial Reporting Manager and persons in charge of internal control;
- the exchange of information with the statutory auditor or the independent auditors, with regard to the functions that fall under its competency;
- the analysis of information flows acquired from the competent company bodies and departments, with specific tasks concerning internal control and risk management.

Generally, the supervisory activity of the Board of Statutory Auditors aims to assess the adequacy of the identification, measuring, management and monitoring system for existing corporate risks, as well as to verify the appropriate and prompt application of corrective actions held to be suitable for reducing company risks to levels considered acceptable by the Board of Directors when defining the business strategy. More specifically, the Board of Statutory Auditors verifies:

- the compliance of the acts and deliberations of the governing bodies with legislation and regulations, statutory provisions and the Code of Conduct, as well as the tangible means of implementing the same;
- the compliance of management choices with the principles of correct administration and, thus, with the general criteria of economic rationality, such as control of substantial legitimacy and compliance with the operative procedures and/or practices in force;
- the adequacy of the organisation structure compared to the size and complexity of the Company, placing particular attention on the completeness of existing company departments, on the separation and on contrasting responsibilities in the functions and duties, as well as the clear definition of mandates or powers of each department;
- the adequacy of the internal control system in relation to the size and complexity of the company, the complexity of the

sector in which the Group operates, as well as strategic objectives;

- the adequacy of the procedures adopted by the Board of Directors to regulate transaction with related parties, as well as the compliance of the same with the laws and regulations on transparency and public information in this regard.

## GOVERNANCE SYSTEM OF GROUP COMPANIES

Iren Ambiente, Iren Energia, Iren Mercato and Ireti (head of the business units) have adopted a traditional governance system, with the Board of Directors made up of 3 members in the case of the first three Companies and 4 members for Ireti respectively. According to the forecasts of the current Shareholders' Agreement (FSU – former Enia Public Shareholders), the Chief Executive Officer of Iren puts forward the Chief Executive Officers of the aforementioned Companies, while the Chairman and Directors are put forward by the Iren BoD and, generally, chosen within the Group.

In regard to the other companies reported in this Sustainability Report, the traditional governance system is the one predominately adopted, with a monocratic composition of the administrative body in some cases and a collegial composition in others. The designations of competence of the Group within the governing bodies are disciplined by the Articles of Associations and Shareholders' Agreements in force for each Company.

Iren's management and coordination of Iren Ambiente, Iren Energia, Iren Mercato and Ireti is expressly provided and governed by the Iren Articles of Association and those of the aforementioned companies. For other subsidiaries, management and coordination derives from the organisation structure that sees four Business Unit Departments reporting to Iren's Chief Executive Officer.

The drafting of sustainability policies and conduct principles to adopt at a Group level are the responsibility of the Board of Directors, in order to ensure the creation of value over time for shareholders and all other stakeholders, in addition to the definition of a sustainability plan (strategic priorities, commitments and objectives) for the development of the economic, environmental and social responsibility of the Group.

### COMPOSITION OF THE BOARD OF STATUTORY AUDITORS AND COMMITTEES AT 31/12/2017

Remuneration and Nomination Committee	Control, Risk and Sustainability Committee	Committee for Transactions with Related Parties	Board of Statutory Auditors
Marta Rocco (Chairman)	Paolo Pietrogrande (Chairman)	Barbara Zanardi (Chairman)	Michele Rutigliano (Chairman)
Moris Ferretti	Alessandro Ghibellini	Lorenza Franca Franzino	Anna Maria Fellegara (Standing Auditor)
Isabella Tagliavini	Marco Mezzalama	Licia Soncini	Emilio Gatto (Standing Auditor)
			Giordano Mingori (Supplementary Auditor)
			Giorgio Mosci (Supplementary Auditor)

# Strategies and policies for sustainability



## IMPORTANT TOPICS



Economic development and value for local areas



Fight against corruption



Human rights



Compliance with laws and regulations





# MISSION, VISION AND VALUES

In 2017, in view of the transformations that the Group has implemented in recent years, the Board of Directors updated the Iren Group mission and vision, strengthening the focus on environmental and social sustainability, which is reflected in the new 2017-2022 Business Plan.

**Mission:** offer our customers and the territories in which we operate in the best integrated management of energy, water and environmental resources, with innovative and sustainable solutions in order to create value over time. For everyone, every day.

**Vision:** improve people's quality of life. Make businesses more competitive. Oversee the growth of local areas with the eyes of change. Make development and sustainability into a single value. We are the multi-utility company that wants to build this future through the application of innovative choices. For everyone, every day.

In keeping with this new mission and vision, the important values for distinguishing and supporting Iren's business in the coming years were identified through the involvement of the Group management. The **values** on which Iren Group bases its strategy are: responsibility, belonging, customer satisfaction, growth and enhancement of employees, teamwork, transparency, change, flexibility and sustainability.

The mission, vision and values were transposed into the Group's Code of Ethics and lie at the core of the business of sharing with personnel, which will carry on into 2018.

## THE STRATEGIC PLAN 2022

In order to determine strategic guidelines that are increasingly effective and able to anticipate new needs and innovative solutions, an in-depth study analysing the most important global macro-trends until 2030 was completed in 2017: trends that will be decisive in the coming years in achieving the growth and development goals underlying the 2022 Strategic Plan. The main macro-trends on which the Group is focusing its attention include:

- **energy transition:** technological progress will produce smarter networks, generating new business models. Growing competition will accelerate the consolidation process already in motion. The expansion of renewable sources will drive greater thermoelectric flexibility;
- **sustainable resources:** the gap to be bridged in energy efficiency compared to Europe will open up new opportunities. The circular economy will become increasingly dominant, creating new scenarios in the waste treatment sector. District heating will become increasingly characterised by the convergence between renewable sources, district cooling and digitisation;
- **technological revolution:** machine learning algorithms will change the way we face operative costs and credit

management, while digitalisation will create new ways of relating with customers and suppliers;

- **the central role of the customer:** it will change the paradigm from passive user to active prosumer - completely digital -, thanks to the development of distributed generation; e-mobility, shared mobility and autonomous driving will change the way in which we move and how distances are perceived.

### STRATEGIC PILLARS



Taking these macro-trends as a starting point, the 2022 Business Plan defined the following strategic pillars.

- **Customer/Citizen:** the two elements merge and become essential for analysing innovative offers. The Customer is no longer merely a passive consumer, but takes on an active role in their purchasing choices. Thanks to the digital and technological revolution that is under way, they can actually acquire information, compare and decide immediately and independently on the basis of characteristics that are intrinsic to the product, while taking into account the effects on the environment where they live and work.
- **Development and efficiency:** these are fundamental factors for guaranteeing increased profitability, utilities and dividends. In line with the strategic approach of the last three years, constant research into maximum integration, process optimisation, agility and effectiveness in decision-making, along with a unified vision are essential elements for achieving challenging development objectives that improve those covered by the previous plan.
- **Sustainability and care of human resources:** a renewed attention towards two themes that are increasingly fundamental. Environmental sustainability has always characterised the choices of the Group, which currently produces around 78% of its energy from renewables and similar sources and this will continue to

increase in the future through Iren's contribution to achieving the sustainable development objectives indicated by the United Nations. The Group applies the same focus when managing its human resources by launching a series of initiatives aimed at increasing satisfaction, motivation and meritocracy.

The Business Plan defines explicit **environmental, social and economic-financial objectives and targets**.

Environmental and social objectives		2022 Targets
<b>Decarbonisation</b>	Reducing GHG emissions, developing renewable sources and district heating, energy efficiency in production processes, energy efficiency services for customers, sustainability education	<ul style="list-style-type: none"> <li>+14% CO<sub>2</sub> emissions avoided compared to 2016</li> <li>+11% TOE saved compared to 2016</li> </ul>
<b>Circular economy</b>	Growth in separated waste collection, extension of "pay-as-you-throw" systems, increase in the recovery of material from Group plants, energy production from non-recyclable waste, zero landfills for urban waste	<ul style="list-style-type: none"> <li>100% urban waste recovered as material and energy</li> <li>+13% energy produced from urban waste compared to 2016</li> </ul>
<b>Water resources</b>	Excellence in water networks, reduction in withdrawals for drinking water, increase in the capacity and quality of purification, reuse of treated waters for irrigation	<ul style="list-style-type: none"> <li>+15% purification capacity compared to 2016</li> <li>85% of networks divided into districts and monitored</li> </ul>
<b>Resilient cities</b>	Energy storage systems, smart grids, smart metering, extension of LED in public street lighting, distributed photovoltaic generation, technologies for sustainable mobility	<ul style="list-style-type: none"> <li>14% district heating volumes compared to 2016</li> <li>97% intelligent gas meters out of the total</li> </ul>
<b>People</b>	Focus on skills and young people	<ul style="list-style-type: none"> <li>50% of employees on performance management programmes</li> <li>+100% employees younger than 30 compared to 2016</li> </ul>
Economic-financial objectives		2022 Targets
<b>EBITDA</b>	Over 70% will derive from regulated and quasi regulated activities	<ul style="list-style-type: none"> <li>950 million Euro (+170 million Euro compared to the 2016 management figure)</li> </ul>
<b>Synergies</b>		<ul style="list-style-type: none"> <li>80 million Euro (in addition to the 50 million already obtained in 2016)</li> </ul>
<b>Net profit</b>		<ul style="list-style-type: none"> <li>Approximately 260 million Euro (+50% compared to 2016)</li> </ul>
<b>Cumulated investments</b>	A significant part is dedicated to development initiatives	<ul style="list-style-type: none"> <li>2.5 billion Euro</li> </ul>
<b>Debt</b>		<ul style="list-style-type: none"> <li>-300 million Euro compared to 2016, despite the significant increase in investments</li> </ul>
<b>Dividend policy</b>		<ul style="list-style-type: none"> <li>+10% annually (compared to the +8% annually in the previous Plan)</li> </ul>

In the context of such initiatives, in order to communicate objectives, actions and results to stakeholders, the Sustainability Report is also a management instrument that makes it possible to monitor compliance of operations with Iren Group's sustainability strategy.



## INSTRUMENTS OF CORPORATE SOCIAL RESPONSIBILITY

The Board of Directors defines the strategies of Iren Group, approves the business objectives, also with particular attention to sustainability. Furthermore, the BoD examines the risks and opportunities connected to the socio-environmental and economic context when approving the Business Plan, the Annual Budget and the Sustainability Report. During 2017, the BoD defined the long-term strategic plan, examining and assessing opportunities and risks connected to the social and environmental context, also making use of the contribution of experts from a wide range of backgrounds and expertise.

The BoD is updated by the Deputy Chairman, a body appointed on the topic, on the status of the sustainability projects and stakeholder engagement activities. Through Local Consultation Committees, stakeholders can also draw the Group's attention to issues concerning services and environmental and social sustainability topics. The Committees are established on a provincial basis and Iren's Chairman and Deputy Chairman are always amongst the members of each Committee. The consultations concerning sustainability between the interested parties and the highest governing body are appointed to the Deputy Chairman that, through the Corporate Social Responsibility and Local Committees Department, is responsible for maintaining an open dialogue with the internal and external stakeholders on these topics. The results of this dialogue generate project ideas for the improvement of environmental and social performances and are reported annually in the Sustainability Report.

The Board of Directors analyses and approves the Sustainability Report which fulfils the role of Consolidated non-financial Statement (DNF) pursuant to Italian Legislative Decree 254/2016, which is prepared annually, to provide information relevant to its performance in the environmental, social and economic context, and to transparently communicate compliance with the commitments undertaken, future commitments and the ability to meet stakeholder expectations.

The 2017 Sustainability Report was approved by the Board of Directors' Meeting held on 7 March 2018, when completeness and consistency with the topics reported in the materiality matrix were also evaluated. The Sustainability Report is prepared by the Corporate Social Responsibility and Local Committees Department, acting under the direct employment of the Deputy Chairman of Iren Group, who is appointed with the proxies for this purpose.

The Control, Risk and Sustainability Committee assesses, together with the Corporate Social Responsibility and Local Committees Department and having consulted the external auditor, the correct usage of the standards for preparing the Sustainability Report adopted by the Group.

The following tasks are attributed to the Corporate Social Responsibility and Local Committees Department:

- coordination of data collection and drafting the Sustainability Report/Non-Financial Statement pursuant to

Italian Legislative Decree 254/2016 and the presentation to stakeholders;

- definition of the improvement plan relevant to the Group Corporate Responsibility;
- collaboration with the Strategic Planning department to define the sustainability targets and objectives;
- participation on the Green Bond Committee established by Iren Group for the correction application of Green Bond Principles;
- definition of the engagement plan, management and analysis of the results from the dialogue with stakeholders;
- definition of the Guidelines for the balanced scorecard and management of the Group balanced scorecard;
- issue and update of the Code of Ethics, in collaboration with the Internal Audit and Compliance department;
- establishment and management of the Local Committees and the on-line platform Irencollabora.it;
- coordination of projects promoted by Local Committees;
- realisation of Group customer satisfaction surveys;
- promotion and participation of initiatives aimed at raising awareness on CSR issues;
- participation in working tables and groups on corporate social responsibility and non-financial reporting;
- participation in national and international surveys (e.g. Carbon Disclosure Project) related to sustainability.

## INTERNAL CONTROL AND RISK MANAGEMENT SYSTEMS

Pursuant to the Code of Conduct and internal guidelines, Iren Group has an Internal Control and Risk Management System, which is configured as a cross process that involves, with different roles and within the context of their respective roles, the administrative bodies (Board of Directors, Control, Risk and Sustainability Committee, Appointed Bodies), the Director Appointed for the internal control and management of risks and sustainability, the Internal Audit Manager, the Risk Management Manager, the Board of Statutory Auditors and the Financial Reporting Manager, as well as all the personnel of Iren Group companies.

In particular, the Board of Directors of each Group company assesses the adequacy of the Internal Control and Risk Management System compared to the characteristics of the company and the indications expressed in the Guidelines. The Board of Directors of the Parent Company carries out the following tasks, subject to the opinion of the Control, Risk and Sustainability Committee:

- defines the guidelines of the Internal Control and Risk Management System so that the main risks relevant to the Group are correctly identified, as well as adequately measured, managed and monitored, also determining the level of compatibility of such risks with business management consistent with the strategic objectives identified;

- at least once a year, assesses the adequacy of the Internal Control and Risk Management System relevant to the characteristics of the business and the risk profile undertaken, as well as its efficacy;
- at least once a year, approves the work plan prepared by the Internal Audit department and submitted by the competent Appointed Body, subject to the opinion of the Board of Statutory Auditors and the Director appointed by the internal control and risk management system (if not coincident with the competent delegated body);
- describes, in the corporate governance report, the main characteristics of the Internal Control and Risk Management System, expressing its opinion on the adequacy of the same;
- assesses the results presented by the statutory auditor, subject to the opinion of the Board of Statutory Auditors, in the letter of suggestions and in the report of the crucial issues arising during the legal audit;
- appoints and dismisses, upon proposal of the competent Appointed Organ and the Chairman, subject to the favourable opinion of the Control, Risk and Sustainability Committee and subject to the opinion of the Board of Statutory Auditors, the Internal Audit manager, ensuring that they are provided with the adequate resources for the fulfilment of their responsibilities.

As part of the Report submitted pursuant to the Code of Conduct, periodically, as a rule every six months, by the Internal Audit Manager to the Control and Risk Committee, the results of the Internal Audit department' audits are reported, as well as the follow-up with the progress of the actions carried out based on the audits from previous years.

In turn, the Committee, on the basis of information received, reports every six months to the BoD, pointing out the critical areas identified and expressing its opinion on the Internal Control System.

## RISK MANAGEMENT<sup>(1)</sup>

An essential component of the Internal Control System of corporate governance of a listed Company is risk management and the Code of Conduct of the Italian Stock Exchange attributes specific responsibilities in this regard.

The Enterprise Risk Management operating model of Iren Group defines the methodological approach to the identification, assessment and integrated management of the risks for the Group, which are broken down into the following phases:



Each phase of the process is performed in accordance with standards and references defined at Group level.

### *The aim of the Enterprise Risk Management model is the integrated and synergistic management of risks*

The Group's Enterprise Risk Management model regulates the roles of the various parties involved in the risk management process, which is under the responsibility of the Board of Directors, and envisages specific Committees that are responsible for the management of each type of risk.

The Enterprise Risk Management system particularly focuses on the management of financial, credit, energy, operational and reputation risks.

Specific "policies" have been defined for each type of risk with the primary goal of meeting strategic guidelines, the organisational/managerial principles, the macro processes and techniques necessary for active management.

The types of risk managed regard:

- financial risks (liquidity, interest rate, exchange rate);
- credit risks;
- energy risks, referable to the supply of gas for the thermoelectric generation and the commercialisation of electricity and gas, as well as the hedging derivatives markets;
- operational risks, referable to asset ownership, the exercise of business activities, the processes, and the procedures and flows of information. Also included are the environmental and regulatory risks, whose impact on the business is monitored on an ongoing basis;
- reputational risks related to the impacts on stakeholders of any malpractices;
- social and environmental risks integrated within the governance of the Enterprise Risk Management model. The analysis of these aforementioned risks refers to the Environmental, Social and Governance (ESG) standards and lies at the foundation of the risk matrix prepared with specific reference to the risk assessment provided by Legislative Decree 254/2016, Article 3, paragraph 1, point c.

Specifically, the assessment of environmental and social risks analyses the main risks that derive from the Group's activities and

<sup>(1)</sup> Further details in the Iren Group 2017 Consolidated Financial Statements.





identifies the appropriate measures to mitigate them, in relation to the organisational-management model and the policies adopted:

- environmental, health and safety risks, deriving from the use of energy and water resources, greenhouse gas emissions and pollutants;
- risks connected to the relationship with company partners, relationships with consumers and communities, the results of the customer satisfaction surveys and connected to the impact on the health and safety of consumers;
- risks connected to personnel management, diversity and safety in the workplace;
- risks connected to a failure to comply with human rights and the measures adopted to prevent breaches;
- risks connected to active and passive corruption.

The Enterprise Risk Management (ERM) model also takes account of climate change and the risks and opportunities - also strategically speaking - that these entail. Among the effects of climate change there has been a growth of critical atmospheric phenomena such as droughts and floods; these events determine impacts on the systems and services, together with the associated economic implications, and require organisational attention in relation to the consequences for Group assets, service management and production and maintenance scheduling.

The Group's Risk Management Department, which reports to the Deputy Chairman, is responsible, inter alia, for coordinating the integrated management process of the Group's risks, assessing insurance requirements, planning the programmes and stipulating and managing policies.

A periodic monitoring process is also in place with regard to claims in the various sectors and across all the Group's areas of operation in order to establish and implement the most suitable methods of containment and reduction.

## ORGANISATIONAL MODEL PURSUANT TO ITALIAN LEGISLATIVE DECREE 231/2001

Iren and the main Group companies have adopted organisation, management and control models pursuant to Italian Legislative Decree 231/2001 (Model 231) with the aim of configuring a structured and organic system of control activities and procedures to prevent, where possible, conduct that could constitute the commission of the crimes covered under Italian Legislative Decree 231/2001, which includes crimes related to corruption.

The risk assessment processes and criteria, the means of identifying and managing conflicts of interest, prevention mechanisms, communication and training with reference to 231/2001-related crimes and, in general, crimes related to the Group's 231 System, therefore also regard crimes of corruption.

In 2017 the review and update of Model 231 of the Parent Group and the main Group Companies continued. This project began after significant organisational changes and the extension, by the legislator, of administrative liability pursuant to Italian Legislative Decree 231/2001 to new crimes, so that 231 Models maintain their

effective capacity to prevent the commission of 231-related crimes over time. The revision of the Models was implemented in accordance with a "risk self-assessment" methodology consisting of the identification and self-assessment being conducted by management ("risk owners") in processes, sub-processes or activities at risk of 231-related crime, also assessing potential risk, the control level and the remaining risk of each sensitive activity.

The review and update project requires that the Model 231 be presented to the Supervisory Bodies of each individual Company and then submitted to the Board of Directors for approval. All employees are informed about the approval of the new Model 231 via a service order, which reminds them that they must consult it and adopt conduct that complies with the provisions contained therein. The updated Model 231 is published in its entirety on the company Intranet for online consultation.

Each Recipient of Model 231 is required to report any breaches or suspicions of breach of the Code of Ethics or the principles of control pursuant to such Model. Any employee that intends to report a breach (or presumed breach) of the Model refers directly to the Supervisory Body, in writing or using the relevant e-mail address ([iren.odv231@gruppoiren.it](mailto:iren.odv231@gruppoiren.it)).

Any reports received from internal and external parties during the period about alleged breaches of the Model or Code of Ethics will be handled within the half-yearly reporting.

In 2017 two reports were sent to the Supervisory Bodies of the Group's Companies.

## SUPERVISORY BODIES

Iren and the main Group companies established a Supervisory Body (SB) pursuant to Italian Legislative Decree 231/2001, tasked with monitoring the functioning and compliance of the Model and updating it.

In order to meet the requirements of autonomy, independence, professionalism and continuity of action, the choice was made to form the SB with a collegiate structure.

The necessary initiative and controls are conferred to the Supervisory Body in order to ensure effective and efficient monitoring of the functioning and compliance of the Model, in accordance with the provisions of Article 6 of Italian Legislative Decree 231/01.

With the assistance of the competent company departments, the Supervisory Body monitors the areas of activities found to be at risk pursuant to Italian Legislative Decree 231/2001 and reports to the Board of Directors twice a year on the activities carried out and the results obtained. If believed to be necessary, the Supervisory Body gives suggestions aimed at improving the control system for activities and oversees their implementation.

The Supervisory Body is also assigned the task of notifying the Chairman of the Board of Directors regarding any breaches in protocols and/or procedures or any failures found during the conducted inspections, so that they may adopt the necessary adjustment measures, involving the Board of Directors where required.

The Supervisory Body assesses reports received at its own discretion and under its responsibility. The identity of reporters will be kept confidential, without prejudice to legal obligations and the protection of the rights of the Company or the persons wrongly accused and/or in bad faith.

If it receives reports concerning breaches of the provisions and rules of the code of conduct of the Model from members of the Board of Directors or the Board of Statutory Auditors, the Supervisory Body must promptly inform the Chairman of the Board of Directors who, having assessed the validity of the report and carried out the required checks, will be able to take the appropriate measures, including summoning a shareholders' meeting, if necessary, to adopt the most suitable measures provided by law.

## CODE OF ETHICS

The Iren Group Code of Ethics was updated by the Board of Directors on 20 December 2017 in order to strengthen its effectiveness as a tool for harmonising the conduct standards for all Group companies. The Code of Ethics, which incorporates the mission, vision and values of Iren Group and translates them into conduct standards for all employees in internal and external relationships, is the cornerstone of the organisational model that aims to prevent the crimes laid down by Italian Legislative Decree 231/2001, including the crime of corruption. Observation of the content of the Code of Ethics by all who operate on behalf of Iren is of fundamental importance for the smooth operation, reliability and reputation of the Group.

Iren's Corporate Social Responsibility Department and Local Committees have the task of promoting the understanding, dissemination and updating of the provisions of the Code of Ethics and to ensure their interpretation. In regard to the update to the Code which took place in December 2017, personnel training began which will take place throughout 2018.

Every director, auditor, employee or collaborator of Iren Group must actively contribute to implementing the Code of Ethics and to reporting any breaches and non-compliance, as far as they are competent. Breaches of the Code of Ethics can be reported, even anonymously, to direct superiors, to the Internal Audit Department and to the Supervisory Body pursuant to Italian Legislative Decree 231/01 that, in collaboration with the Corporate Social Responsibility Department and Local Committees, will assess the validity.

Senior Managers and Managers of company bodies and departments are committed to encouraging and protecting the reports of possible breaches of the Code of Ethics from employees, to prevent any kind of reprisal and to promptly refer any reports received, adopting the immediate and crucial corrective measures required by the situation.

Iren ensures the verification of each notice of breach of the Code of Ethics, received pursuant to the methods and through the channels specified by the Code, the assessment of the facts and the application of appropriate sanctions in case of breaches. Specifically, it is the responsibility of the Supervisory Body to formulate their own observations concerning the alleged breaches

of the Code of Ethics of which they are made aware, reporting any violations found to the competent company bodies.

Mandatory acceptance of the Code of Ethics is required by all suppliers from the offer stage, without the possibility of exceptions or amendments. Companies are required to report any attempt to disturb, any irregularities or misrepresentation by any competitor or party involved, during the tender and/or when performing the contract, to the Iren Group company that calls the tender, as well as any anomalous request or demand from Group employees or anyone who can influence the decisions of the tender or the contract and its execution. Therefore, all employees must notify their superior and the Personnel Department in writing of any interest, direct or indirect, in the business of the supplier and make known any past or present relationship of a financial, business, professional, family or social nature such as to influence the impartiality of their conduct in regard to the supplier.

The Code of Ethics is also available on the Group's website in order to achieve maximum dissemination and understanding.

Furthermore, to support ethical conduct and compliance with the law and Code of Ethics, Iren Group makes available information concerning laws, regulations and insights regarding quality, environment and safety to all stakeholders, both internal and external. This can be found on the company website and Intranet.

In 2017 the Group did not receive any notifications of breaches to the Code of Ethics.

## INTEGRATED SYSTEM AND CERTIFICATION

Iren Group has developed an Integrated System (Quality, Environment and Safety - QES), which is structured in such a way as to adequately monitor all operating processes that influence the service levels with the attention increasingly focused on the customer and on the basis of risk identification and governance as part of ongoing analysis of the organisational context and the needs and expectations of the parties involved.

The Certified System is a streamlined and flexible organisational model that can quickly adapt to changes in customer expectations and needs, as well as internal organisational changes, thereby ensuring continuous monitoring of the effectiveness and efficiency of the processes at the same time.

The values pursued by Iren Group form the basis of the Integrated System Policy, which is distributed and shared with all personnel.

Iren, Iren Ambiente, Iren Energia, Ireti, Iren Mercato and the main subsidiaries – AMIAT, ASM Vercelli, Atena Trading, Iren Laboratori, Iren Acqua, Iren Acqua Tigullio and Salerno Energia Vendite – have systems certified in accordance with the international standards ISO 9001 (Quality) and BS OHSAS 18001 (Security). Bonifica Autocisterne carries ISO 9001 certification. Iren, Iren Ambiente, Iren Energia, Ireti and the main subsidiaries – AMIAT, ASM Vercelli, Iren Laboratori, Iren Acqua, Iren Acqua Tigullio, TRM and REI – are certified according to the international standard ISO 14001 (Environment). Iren Energia, Iren Mercato and Iren Rinnovabili are certified ESCOs (UNI 11352), while Iren



Laboratori and Studio Alfa are ISO 17025 certified. The latter is also SR-10 certified. Subsidiaries that do not manage operational activities, in that they are purpose vehicles or only hold assets, do not have certification systems (AMIAT V., Enia Solaris, Greensource, GPO, Immobiliare delle Fabbriche, Monte Querce, TRM Holding, TRM V. and Varsi Fotovoltaico).

The monitoring of the Quality, Safety and Environment systems are guaranteed for Iren Ambiente, Iren Energia, Iren Mercato and Ireti by the Personnel, Organisation and Information Systems Department of Iren and by local offices for ASM Vercelli and Salerno Energia Vendite.

In 2017 the redesign of the Certified Quality and Environment Systems was embarked upon, on the basis of the 2015 review of the reference law.

The Management Systems were redesigned on the basis of the single structure (High Level Structure) which ISO defined for all certification standards (Quality, Environment, Safety, Energy Efficiency, Business Continuity, Information Security, etc.). This structure calls for the analysis of risks connected to operations and products and services offered on the basis of the analysis of the internal and external context of the company. Therefore, a methodology to identify and evaluate these risks was developed and applied to each Iren process and those of Group Companies. Starting with the risks identified, the documentation was also reviewed and its applicability and adequacy assessed. The project concluded with the Certification Bodies acknowledging the validity of the approach and the results obtained and with the renewal, with the transition to the new standards, of the ISO 9001:2015 and ISO 14001:2015 certifications for Iren, Ireti, Iren Mercato, Iren Laboratori, AMIAT, Iren Acqua and Iren Acqua Tigullio. The other Group Companies will complete this process in 2018, based on the expiry dates of the individual certifications.

In 2017, all the audits conducted by the Certifying Bodies at Group companies passed, confirming the maintenance of the certificates, which include the Multi-site Accreditation for Iren Group Laboratories, the UNI 11352 of Iren Rinnovabili, EMAS of Iren Ambiente and the certification for the sale of electricity produced solely from renewable sources, in compliance with the Certiquality Technical Document no. 66, by Iren Mercato.

Furthermore, the 303/2008/EC – FGAS certification was transferred from Iren Gestioni Energetiche to Iren Energia, with the latter maintaining said certification, as regards the service provided for devices containing fluorinated greenhouse gases. Similarly, the UNI 11352 certification was transferred from Iren Servizi e Innovazione to Iren Energia, with the latter maintaining the certification.

The achievement and maintenance of voluntary certificates evidence the commitment of Iren Group in protecting the environment, the rational use of natural resources, full compliance with legislation, raising awareness amongst its customers and service levels.

To ensure sustainable growth based on continuous improvement, resources were employed for the:

- development of the production of energy from renewable sources or similar and district heating, together with the adoption of the best technologies to guarantee a reduced environmental impact;
- improvement of the use of water resources, in terms of both its withdrawal and its discharge;
- renovation of the urban wastewater treatment systems and search for the best technologies in order to improve the quality of effluents and minimizing odorous emissions;
- correct management of obligations concerning special waste: production, storage, transport and disposal and/or final recovery;
- spread of information on the impact that company activities have on the external environment through specific publications, such as the Sustainability Report and Environmental Declarations.

From a management point of view, to reduce the environmental impact of the Group's activities, particular importance was given to:

- redesigning the environmental Management Systems certified in accordance with UNI EN ISO 14001 and EMAS standards;
- monitoring environmental performance through the use of special indicators for each significant environmental aspect;
- analytically testing the impact on the environment, with particular reference to atmospheric emissions, air quality, water discharges, special waste, acoustic emissions and electromagnetic fields;
- conducting specific internal audits aimed at verifying the correct management of the environmental problems connected with company plants;
- fulfilling administrative obligations, with particular regard to the monitoring and control activities associated with the Integrated Environmental Authorisations (I.P.P.C. Directive) and the emission of greenhouse gases (Emission Trading System), for the plants concerned;
- involving company personnel through participation in specific training courses on environmental issues and best plant management practices.

## HUMAN RIGHTS

Attention to and respect of individuals are issues that Iren Group places at the heart of its growth and the sustainable development of the community and local area.

The Group mainly works in Italy where a complex system of laws contributes to preventing the risk of violating human rights.

Nevertheless, the Group considers the UN's Universal Declaration of Human Rights, the International Labour Conventions and Recommendations issued by the ILO (International Labour Organization) and the Earth Charter drafted by the Earth Council to be fundamental points in the definition of its values.

Recognising the absolute value of the fundamental principles of the Constitution of the Italian Republic, respect for the people's dignity and the condemnation of all forms of discrimination is fundamental for Iren Group.

These principles translate into a refusal to enter into negotiations or assign tasks that might violate or contradict the fundamental principles that underlie respect for human dignity and in our commitment to not collaborate with partners that violate these principles, with particular reference to the use of child labour and the protection of the primary guarantees of all workers.

At Iren Group, respect for human rights is a fundamental prerequisite for correct business activity, which is reflected in our scrupulous compliance with law and contract regulations, with the provisions of the 231 organisational and management model and the Code of Ethics, as well as in the constant discussion with Trade Unions and stakeholders (via Local Committees) and in the suppliers' management system. This issue is so integral to the company culture that all action areas and tools mentioned above are subject to constant update and improvement.

Furthermore, the Group has adopted tools to promote accessibility and the use of the services it provides, with a particular focus on people with disabilities, vulnerable groups and foreign-speaking residents.

In the non-recurring operations carried out in 2017 in order to acquire companies/shares, the Group carried out the appropriate due diligence to verify the application of the labour and occupational safety laws provided by Italian law.

In 2017, supplier analysis was conducted via a questionnaire that aimed to ascertain the human rights policies adopted by the companies that hold active contracts with the Group.

Of the 778 supplier companies that responded – more than 32% of the qualified suppliers – over 50% have adopted human rights policies that fall into the following areas:

- equal opportunities and equal treatment irrespective of race, gender, language, religion, nationality, political opinion, sexual orientation, social status, disability, age or other condition of the individual that is not connected to the requirements for carrying out their job;
- training to raise awareness and prevent discrimination;
- formal reporting systems that allow workers to report human rights breaches, ensuring the protection of the reporter's identity;
- checking of the age of employees during the hiring process, even if done by recruitment companies;
- measures to integrate employees;
- formal control systems to ensure that the company does not request that its employees deposit money, identity documents or credit cards during the hiring process.

Furthermore, amongst the suppliers who responded, there was only one instance (0.1% out of the total) in which a complaint for a human rights breach was received, while there were no cases of legal actions or complaints for discriminatory practices.

This survey will be repeated regularly to maintain constant monitoring of the supply chain.

Iren Group has never received human rights complaints. Nevertheless, sanction mechanism for employees and suppliers are outlined in the contracts for established breaches.

## CODE OF CONDUCT AND SERVICE CHARTERS

In 2017 the Iren Board of Directors resolved to formally adhere to the recommendations of the Code of Conduct for Listed Companies (July 2015 edition) drafted by the Committee for Corporate Governance of the Italian Stock Exchange, the effective transposition of which had already begun previously.

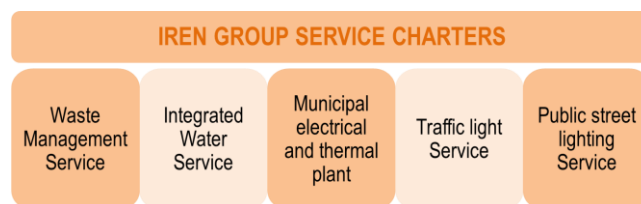
Iren Group operates in full compliance with the Code of Business Conduct for the sale of electricity and natural gas and, in general, with the standards issued by ARERA (The Italian Regulatory Authority for Energy, Networks and Environment – the former AEEGSI).

The Management of Environmental Services is regulated by specific agreements signed with the consumers through the Charter of Services instrument, that regulates the action through the commitment to achieve high quality standards in terms of continuity and quality of relations with customers. A reimbursement system in the event of malfunctioning guarantees the operator's commitment to comply with the standards agreed upon.

The management of the Integrated Water Service is regulated by strict ARERA regulations, to which the Service Charters have conformed.

In May 2017, Iren signed an Alternative Dispute Resolution (ADR) protocol for joint conciliation with Consumer Associations that adhere to the National Consumer and User Council (C.N.C.U.); this protocol applies to customers/users who are energy and water "consumers" of Group companies (in particular, Iren Mercato, Ireti, Iren Acqua, Iren Acqua Tigullio) across the whole of Italy, for the sale and distribution of gas and electricity, the integrated water service and district heating. The ADR is an alternative dispute resolution procedure that has the benefit of offering a simple and quick out-of-court resolution for disputes that have arisen between consumers and companies, which were not resolved during complaint management.

The signing of the protocol was followed by the establishment of the Guarantee Body, with the Associations and Iren nominating 3 representatives each, and training for conciliators on both sides being organised. The Joint Conciliation Body is awaiting certification by the Authority.







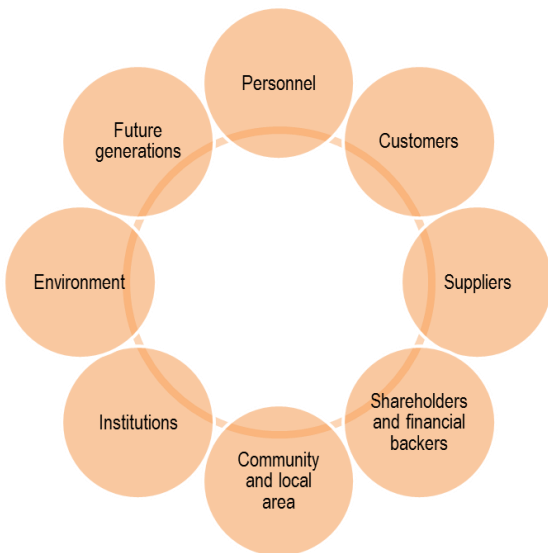
# RELATIONS WITH STAKEHOLDERS

Iren Group is constantly committed to creating, strengthening and expanding its relationships, guaranteeing its stakeholders ample space to air their views and to enter into dialogue. The criteria to involve their stakeholders are defined to be as inclusive as possible, and address transparency, fairness, sensitivity to ethical, environmental and social issues and consistency with respect to the activities undertaken by the Group. The dialogue with its stakeholders is based upon the principles of inclusiveness, materiality and compliance laid down in AccountAbility1000.

Considering the importance of the activities managed by the Group for the quality of life of residents and for the local area, the main stakeholder categories are represented by: personnel, customers, suppliers, shareholders and financial backers, communities and local areas, institutions, environment and future generations. These categories are represented by the Local Committees, an innovative channel for dialogue, debate and participatory planning between Iren Group and its stakeholders concerning the company's services and the social and environmental sustainability topics.

*Local Committees are bodies for listening, discussion and participatory planning between Iren Group and its stakeholders*

## MAIN STAKEHOLDER CATEGORIES OF IREN GROUP



The Corporate Social Responsibility Department and Local Committees, which report to the Deputy Chairman of Iren Group, are assigned the activities related to the Local Committees, amongst others, and those, more generally, concerned with stakeholder engagement.

For years now the Group has structured a stakeholder engagement project present in the Local Committees in the materiality analysis (see page 9) to share and assess important topics for drafting the Sustainability Report. The 2017 materiality analysis made it

possible to compare the vision of Iren Group with that of the different categories of stakeholders, in order to receive their input and develop a sustainability report that was increasingly relevant and focused on their real interests, thus providing a clear framework of strategies, policies and results across the various activity areas.

To deepen the discussion concerning environmental and social performance and sustainability, in 2017 the Group organised series of public meetings for stakeholders and in-depth discussions with the Local Committees, as well as participation in seminars and conferences and the production of specific publications.

The realisation project for the new system of Iren Group sites concluded in 2017, which represent an important interface with all stakeholders, and the irensostenibilita.it site was updated, which contains the main data of the Sustainability Report, also available in English. Every year the Sustainability Report is published on the Group's website in Italian and English and specific information brochures are produced in both languages.

## IREN LOCAL COMMITTEES

Local Committees are a fundamental pillar within the strategies that aim to create, strengthen and extend dialogue between Iren Group and the stakeholders.

The Committees are formed to ensure a deeper-rooted presence in the local community, thanks to the participatory planning and moments of consultation on environmental and social sustainability, innovation and service levels.

In order to ensure and broaden widespread involvement, the Committees use the Irencollabora.it on-line platform, the first of its kind on a national level, where citizens can make proposals and suggestions directly on the issues dealt with by the Committees, with the aim of generating concrete and tangible projects. The information flow produced by the platform is also a valuable source that inspires Iren to adopt innovative service strategies and anticipate the needs of the local areas.

Specific working groups have been established within the individual Committees aimed at the development of the projects presented within the Committee or on the Irencollabora.it platform.

In 2017, 89 Committee and working group meetings were held and, in December 2017, there were 926 profiles registered on the platform, 40 projects and 27 proposals.

Through Local Committees, stakeholders can also draw the Group's attention to issues concerning the company's services, as well as environmental and social sustainability topics.

The Chairman and Deputy Chairman of Iren, who are members of the Local Committees, report regularly to the Control, Risk and Sustainability Committee and the Board of Directors, on the trend of the activities and the discussion and planning activities carried out within the Committees.

The table on the next page identifies the stakeholders, key topics and critical situations for each category of stakeholders and the projects and initiatives for the involvement of the same.

## ACTIVITIES AND TOPICS FOR ENGAGEMENT OF STAKEHOLDERS

Stakeholder	Main categories	Key topics	Projects, initiatives aimed at the stakeholders
<b>Personnel</b>	<ul style="list-style-type: none"> <li>• Employees</li> <li>• External staff (other than employees)</li> <li>• Trade Unions</li> </ul>	<ul style="list-style-type: none"> <li>• Health and Safety</li> <li>• Exploitation of skills</li> <li>• Remuneration</li> <li>• Training</li> <li>• Internal communication</li> <li>• Welfare</li> <li>• Equal opportunity</li> <li>• Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• Training initiatives</li> <li>• Work Life Balance</li> <li>• Internal mobility</li> <li>• Code of Ethics</li> <li>• Industrial Relations</li> <li>• Trade union agreements</li> <li>• “Irenfutura” Portal</li> <li>• “Iren Welfare” Portal</li> <li>• Incentivised termination of the employment relationship</li> <li>• “Reward &amp; Performance Management” and “Conoscenza” Projects</li> <li>• “New-graduate hires” Project</li> <li>• “Welfare” Project for employees in Genoa and the province</li> <li>• Materiality analysis</li> <li>• Local Committees</li> </ul>
		<ul style="list-style-type: none"> <li>• Service Levels</li> <li>• On-line and mobile services</li> <li>• Transparent Communications</li> <li>• Tariffs</li> <li>• Credit management</li> <li>• Service reliability and safety</li> <li>• Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• Front offices and call centres</li> <li>• Transparent information on bills</li> <li>• Website</li> <li>• App for smartphone and tablet</li> <li>• Social channels</li> <li>• Customer Satisfaction surveys</li> <li>• Initiatives for the safety of customers</li> <li>• Initiatives to improve the quality of services</li> <li>• Code of Ethics</li> <li>• Meetings and framework agreements with Associations</li> <li>• Credit management protocols</li> <li>• Social tariffs</li> <li>• Joint conciliation protocols</li> <li>• Materiality analysis</li> <li>• Training meetings on social bonuses</li> <li>• Guides for reading bills</li> <li>• Local Committees</li> </ul>
<b>Customers</b>	<ul style="list-style-type: none"> <li>• Users of retail and business services</li> <li>• Local Authorities</li> <li>• Consumer associations</li> </ul>	<ul style="list-style-type: none"> <li>• Management of the supply chain</li> <li>• Transparent Communications</li> <li>• Contractual conditions</li> <li>• Payments</li> <li>• Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• Procurement portal</li> <li>• Suppliers’ Register</li> <li>• Code of Ethics</li> <li>• Training/information for third party companies</li> <li>• Materiality analysis</li> <li>• Local Committees</li> </ul>
<b>Suppliers</b>	<ul style="list-style-type: none"> <li>• Suppliers of goods, services and works</li> <li>• Qualified suppliers</li> <li>• Local suppliers</li> <li>• Trade associations</li> </ul>	<ul style="list-style-type: none"> <li>• Corporate Governance</li> <li>• Transparent Communications</li> <li>• Trend of the share</li> <li>• Green Bond Issue</li> <li>• Economic financial results</li> <li>• Rating</li> <li>• Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• Roadshows</li> <li>• Webcasting service</li> <li>• Communication of results and possible future risks</li> <li>• Adoption of disclosure policies</li> <li>• Inclusion in ethical indexes</li> <li>• Participation in Carbon Disclosure Project</li> <li>• InvestIren Newsletter</li> <li>• 2022 Business Plan</li> <li>• Shareholders’ Meeting</li> <li>• Calendar of corporate events</li> </ul>
<b>Shareholders and Financial Backers</b>	<ul style="list-style-type: none"> <li>• Retail investors</li> <li>• Public Shareholders</li> <li>• Institutional Investors</li> <li>• Financial community</li> <li>• Ethical Funds</li> <li>• Banking institutions</li> </ul>		



Stakeholder	Main categories	Key topics	Projects, initiatives aimed at the stakeholders
<b>Institutions and the Community</b>	<ul style="list-style-type: none"> <li>Local Authorities</li> <li>Regulatory Authorities</li> <li>State</li> <li>Non-Governmental Organisations (NGOs)</li> <li>Associations</li> <li>Media</li> <li>Local citizens</li> </ul>	<ul style="list-style-type: none"> <li>Attention to the local area</li> <li>Dialogue and involvement</li> <li>Creation of opportunities for local area growth</li> <li>Transparent Communications</li> <li>Investments and support for initiatives in local areas</li> <li>Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>Local Committees</li> <li>Notification of opinions and documents</li> <li>Participation in meetings with Institutions</li> <li>Surveys and questionnaires</li> <li>Conferences, seminars and workshops</li> <li>Participation in projects in cooperation with Institutions</li> <li>Opening of plants</li> <li>Local Committees and "Irencollabora.it" platform</li> <li>Materiality analysis</li> <li>Shape Energy Seminar</li> <li>Facilitation plans for Communities affected by environmental emergencies</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>Trade associations</li> <li>Technicians and sector experts</li> <li>Representatives of authorities and institutions</li> </ul>	<ul style="list-style-type: none"> <li>Water network leaks</li> <li>Management of water treatment plants</li> <li>Efficiency of the gas distribution network</li> <li>Production of energy and atmospheric emissions</li> <li>Energy saving</li> <li>Waste management</li> <li>Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>Development of renewables</li> <li>Energy savings and efficiency projects</li> <li>District heating implementation</li> <li>Increase in the capacity to dispose of special waste</li> <li>Systems to increase the separated waste collection</li> <li>Reduction of water network leaks</li> <li>Containment of atmospheric emissions</li> <li>Awareness raising on environmental issues</li> <li>Local Committees</li> </ul>
<b>Future Generations</b>	<ul style="list-style-type: none"> <li>Schools</li> <li>Universities</li> <li>Research centres</li> <li>Trade associations</li> <li>Incubators</li> </ul>	<ul style="list-style-type: none"> <li>Environmental protection</li> <li>Smart City</li> <li>Demand Side Management Programmes</li> <li>Innovative services</li> <li>Reduction of environmental impacts</li> <li>Climate change</li> <li>Sustainable behaviours</li> <li>Environmental, corporate and economic responsibility</li> </ul>	<ul style="list-style-type: none"> <li>Educational programmes in schools (Edu.Iren) and in universities</li> <li>Guided tours</li> <li>Projects and investments in research and innovation</li> <li>Partnership for research and innovation</li> <li>Framework agreements with Universities and research centres</li> <li>Local Committees</li> </ul>

## ETHICAL INDEXES

The Group's decision to place sustainability at the centre of its development is confirmed by the 2022 Business Plan that places sustainability among the five pillars on which the Group's strategy for the years to come is based. Resilient cities, decarbonisation, circular economy and the protection of water resources lie at the heart of the Group's agenda, which will see around 1 billion Euro invested in sustainability. This will allow important objectives to be achieved which represent the tangible commitment to merge the development of the Group with that of the communities, local areas and the environment. This orientation was also from an economic point of view and this is an aspect particularly appreciated by investors.

The Group is part of the FTSE Environmental Opportunities index series, which represent the performance of companies with environmental opportunities, namely companies whose activities may represent added value solutions to environmental problems. In particular, these indexes are the "FTSE EO All-Share Index" and the "FTSE EO Water Technology Index".



Iren Group has participated for the sixth consecutive year in the Carbon Disclosure Project "CDP Climate Change 2016". From the CDP report – an independent non-profit organisation that collects, analyses and shares environmental performance data worldwide – Iren stands out for its environmental performance. In fact, it has received the highest award (level A) for the actions and strategies implemented to reduce emissions and mitigate climate change.



# COMMITMENT TO IMPROVEMENT

## ENVIRONMENT

Objectives	Actions carried out in 2017	Future objectives
<b>Consolidate the leadership of environmentally friendly sources</b>	Beginning of the redevelopment of the hydroelectric plants of Chiomonte and Susa	<ul style="list-style-type: none"> <li>• 76% of energy produced from renewables and similar sources by 2022</li> <li>• Investments in renewable source (biomass plants) and mini-hydro sectors</li> </ul>
<b>Increase energy efficiency</b>	<ul style="list-style-type: none"> <li>• Energy efficiency of hydroelectric and thermolectric production plants</li> <li>• Replacement equipment with LED lights (8,500 in the City of Asti and 1,686 in the Biella area, via the Consorzio Enerbit)</li> <li>• Efficiency raising of 116 thermal power stations in the City of Turin</li> <li>• Installation of LED lamps in the pit and unloading zones of the Piacenza waste-to-energy plant</li> <li>• Reduction of electricity consumption deriving from division of the aqueduct networks into districts (Parma and Savona energy recovery of 2-3% compared to 2016)</li> </ul>	<ul style="list-style-type: none"> <li>• Increase of energy saved by 2022 (+11% TOE compared to 2016)</li> <li>• Launch of the second phase of replacing lamps with LED lights (3,200 lamps), upon acceptance of the Municipality and Province of Biella</li> <li>• Beginning of the replacement of around 6,200 lamps with LED lights for the Municipality of Fidenza</li> <li>• Energy efficiency-raising interventions for the management of heating systems in the Municipality of Grugliasco and for the Royal Theatre of Turin</li> <li>• Replacement of street lights inside the perimeter of the Piacenza waste-to-energy plant</li> </ul>
<b>Reduce atmospheric emissions</b>	<ul style="list-style-type: none"> <li>• Installation of heat exchangers and pumps for the heating of natural gas, with district heating fluid in place of the existing boilers powered by natural gas in the decompression station of the Moncalieri Plant</li> <li>• Investments in the district heating network to connect the TRM waste-to-energy plant with the network in Grugliasco</li> <li>• Work on the TRM district heating building to use heat produced by the plant and the divestiture of the external distribution network</li> <li>• Procurement of equipment to connect the Piacenza waste-to-energy plant to the city district heating network</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in CO<sub>2</sub> emissions avoided by 2022 (+14% compared to 2016)</li> <li>• Growth in volumes served by the district heating network by 2022 (+14% compared to 2016)</li> <li>• Continued investments in the district heating network to connect TRM with the network in Grugliasco</li> <li>• Completion of the connection project of the Piacenza waste-to-energy plant to the city district heating network</li> </ul>
<b>Reduce industrial water consumption</b>	<ul style="list-style-type: none"> <li>• Recirculation of wastewater in the waste removal system of the Parma IEC</li> </ul>	<ul style="list-style-type: none"> <li>• Minor changes to the Parma IEC to send wastewater for chemical-physical processing, reducing the production of liquid waste sent to external plants</li> </ul>
<b>Contain olfactory emissions</b>	<ul style="list-style-type: none"> <li>• Upgrading the odour abatement system of the sludge treatment zone of the Parma IEC</li> </ul>	<ul style="list-style-type: none"> <li>• Continued containment of the olfactory emissions</li> </ul>
<b>Improve the waste collection, management, recovery and disposal systems and increase separated waste collection (circular economy)</b>	<ul style="list-style-type: none"> <li>• Activation and extension of home waste collection services with an increase in separated waste collection</li> <li>• Drafting the project and the environmental impact assessment of the paper and plastic selection system at the Parma IEC</li> <li>• Authorisation procedures begun for the plastic and paper selection system at the Borgaro site (Turin)</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of urban waste collected sent for material and/or energy recovery</li> <li>• Additional growth in separated waste collection in the local areas served</li> <li>• Increase in the quantity of recoverable waste processed at the Group-owned plants</li> <li>• Submission of an application for the construction of a recovery plant for organic waste with biomethane production</li> <li>• Conclusion of authorisation procedures for the construction of a plastic and paper selection system at the Parma IEC</li> <li>• Conclusion of authorisation procedures and work assignment for the construction of a plastic and paper selection system at the Borgaro site (Turin)</li> </ul>





Objectives	Actions carried out in 2017	Future objectives
<p><b>Reduce leaks in aqueduct networks through monitoring and division of the areas into districts</b></p>	<ul style="list-style-type: none"> <li>• Creation of a Parma task force with the installation of dozens of district meters and the launch of targeted loss research projects, with traditional techniques and with new satellite technology (in the Province of Parma in 2017, input was -2.6 million m<sup>3</sup> compared to 2016)</li> <li>• 29 active districts in Rapallo – Zoagli – S. Margherita – Portofino with substantial volumes recovered in Rapallo where a significant reduction in pressures was made</li> <li>• 10 active districts in Genoa where, in the Sestri Ponente district, a pressure reduction and regulation system were introduced</li> <li>• Recovery of significant leaks and the replacement of damaged pipes in Cairo Montenotte with a notable reduction in water input (-46%)</li> <li>• Completion of the district division project for the city of Vercelli</li> </ul>	<ul style="list-style-type: none"> <li>• 85% of water networks divided into districts and monitored by 2022</li> <li>• Additional reduction in volume of water fed to the grid across the entire area managed in the Province of Parma (from 40.3 to 38.0 million m<sup>3</sup> at the end of 2018)</li> <li>• Launch in 2018 of precise monitoring of the volumes fed into the network in the Piacenza area with the creation of the first city districts</li> <li>• The continuation of the activity in the Genoa area with the transition, in 2018, from 10 to 16 districts and the introduction of additional valves to reduce pressure</li> <li>• Completion of the district division system in Tigullio with the last 5 districts in S. Margherita</li> <li>• Division into districts begun in Savona</li> <li>• Launch of the leak study in Chiavari and Lavagna</li> <li>• Extension of the use of satellite technology to search for leaks in the Liguria area</li> <li>• Creation of the first 3 districts in the Vercelli area and the recovery of certain old districts in the bordering municipalities</li> </ul>
<p><b>Improve purification processes and subsequent energy consumption</b></p>	<ul style="list-style-type: none"> <li>• Construction of plants with advanced process control logic at the Monticelli (Parma) and Salvaterra (Reggio Emilia) treatment plants with savings in electricity consumption</li> <li>• Replacement of the compressors at the Traversetolo treatment plant (Parma)</li> <li>• Launch of upgrading works for the sludge dewatering unit of the Parma Ovest and Roncocesi (Reggio Emilia) plants</li> <li>• Upgrading works to the Cadelbosco (Reggio Emilia) and Castel San Giovanni (Piacenza) plants</li> <li>• Completion of planning for the Moneglia (Genoa) treatment plant and procedures begun for the performance of works</li> <li>• Upgrading work of the Rossiglione (Genoa) plant completed</li> <li>• Efficiency-raising works completed on the air treatment section of the Lavagna and Sestri Levante (Genoa) treatment plant</li> <li>• Trial protocol agreed upon for plants with advanced process control logic at the Vercelli treatment plant</li> <li>• Installation of advanced process control logic and the upgrading of the airing system at the Saluggia (Vercelli) treatment plant</li> <li>• Optimisation of wastewater pumping in the City of Vercelli with relative consumption monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in purification capacity by 2022 (+15% population residents served compared to 2016)</li> <li>• Implementation of advanced process control logic for the treatment plants of Parma Ovest, Guastalla, Praticello, Forche, San Martino and Cadelbosco (Reggio Emilia)</li> <li>• Completion of system upgrading for the treatment plants of Boretto and Meletole (Reggio Emilia) and Sorbolo (Parma)</li> <li>• Commencement of system upgrading for Collecchio, Borghetto, S. Maria del Piano and Monticelli-Montechiarugolo (Parma)</li> <li>• Upgrade design for the plants of Fiorenzuola D'Arda and San Nicolò (Piacenza), and Arenzano Porto (Genoa)</li> <li>• Completion of adaptation and upgrading works to the Moneglia and Ronco Scrivia (Genoa) treatment plants</li> <li>• Start of advanced process control at the Vercelli, Saluggia, Desana and Bianzè (Vercelli) treatment plants</li> </ul>
<p><b>Extend the sewage and treatment service to areas not served</b></p>	<ul style="list-style-type: none"> <li>• Work to connect the sewage system to the Trino (Vercelli) treatment plant and the installation of treatment systems on untreated sewerage section in Olcenengo (Vercelli)</li> </ul>	<ul style="list-style-type: none"> <li>• Start of installed plant systems</li> </ul>

Objectives	Actions carried out in 2017	Future objectives
<p><b>Improve the efficiency of the gas distribution network in order to ensure high levels of safety and reduce leaks to a minimum</b></p>	<ul style="list-style-type: none"> <li>• Continuation of renovation works on the gas network, in line with that provided by AEEGSI, in Liguria in particular (decommissioning of 1.5 km of pipelines made from cast iron and other obsolete materials and 7 km of steel pipelines without cathodic protection)</li> <li>• Cathodic protection of the entire newly-laid steel network</li> <li>• Planned inspection of over 84% of the gas network across the areas managed to search for leaks</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of the upgrading of the network in agreement with the provisions of AEEGSI</li> <li>• Continuation of efficiency monitoring and maintenance in coming years</li> <li>• Continuation of scheduled searching for leaks in coming years</li> </ul>
<p><b>Reduce emissions from electromagnetic fields (EMF): Monthly monitoring of electrical cabinets to keep the EMF values within the Quality value limits</b></p>	<ul style="list-style-type: none"> <li>• Monthly control of safety and electromagnetic fields in new/renovated operational substations through technical safety inspections integrated by the results of the electromagnetic fields measures</li> <li>• 8 inspections on 44 new substations installed/renovated</li> <li>• Measurement of the EMF of electricity distribution plants</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of the design and construction of the new MV/LV substations and monthly safety checks</li> </ul>
<p><b>Reduce the number of electrical devices containing PCB/PCT contaminated oil</b></p>	<ul style="list-style-type: none"> <li>• Decommissioning and disposal of 26 pieces of equipment containing oil contaminated with PCB</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of decommissioning and disposal of equipment containing oil contaminated with PCB/PCT</li> </ul>
<p><b>Create educational visit courses for the Turin waste-to-energy plant</b></p>	<ul style="list-style-type: none"> <li>• Preparing the visitor tunnel and multimedia tower at TRM</li> <li>• Managing 100 visits to the TRM waste-to-energy plant amounting to 4,025 participants in total</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of the activity and increase in visitors</li> </ul>
<p><b>Implement the QSE (<i>Qualità, Sicurezza, Ambiente</i> - Quality, Safety, Environment) Certified System</b></p>	<ul style="list-style-type: none"> <li>• Developing the methodology for conducting operational risk assessment on processes, as provided for by the 2015 review of the reference legislation for Quality and Environment certification (ISO 9001 and ISO 14001)</li> <li>• Renewal of Certifications with the transition to the new standards for Iren, Iren Laboratori, Iren Mercato, Ireti, Iren Acqua, Iren Acqua Tigullio, AM.TER. and AMIAT</li> <li>• UNI 11352 certification – for companies that supply energy services (ESCO) – for Iren Energia and the renewal of the certification for Iren Rinnovabili</li> <li>• F-Gas certification – for the companies working on plants and equipment containing fluorinated gas – Iren Energia</li> <li>• Maintenance of the QES and EMAS certifications for Iren Ambiente with the extension to: R.E.I. landfill, multi-purpose waste management plant in Reggio Emilia, Systems Centre in Piacenza, Parma IEC, administrative, commercial and personnel activities in the Emilia area and billing activities and tax management</li> <li>• EMAS registration submission for TRM</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of the update to certified Systems for the remaining Group companies with the consequent renewal of the Certifications with the transition to the new standards</li> <li>• Maintenance of the UNI 11352 Certification of Iren Energia</li> <li>• Maintenance of the F-Gas Certification of Iren Energia</li> <li>• Renewal of the UNI 11352 Certification of Iren Rinnovabili</li> <li>• Extension of the Iren Ambiente QES Certifications to the Cornocchio (Parma) and Mancasale (Reggio Emilia) Plant Centres and to the Design and Works Department</li> <li>• Start of the ISO 9001 and BS OHSAS 18001 certification process for TRM</li> <li>• Acquisition of the EMAS Registration and the maintenance of the ISO 14001 Certification of TRM</li> <li>• Definition and implementation of the certifiable energy efficiency Management System, pursuant to the ISO 50001 standard, for Iren Energia</li> <li>• Definition and implementation of the certifiable information security management System, pursuant to the ISO 27001 standard, for the Parent Company</li> </ul>



## PERSONNEL

Objectives	Actions carried out in 2017	Future objectives
<p><b>Completion of the 2015-2018 demographic rebalancing plan and the launch of the new 2019-2020 plan that extends across the entire Group with the prevision of young hires (mainly under 30s)</b></p>	<ul style="list-style-type: none"> <li>• Completion of the demographic readjustment plan (2015-2017)</li> <li>• Study, approval and launch of the new demographic rebalancing plan (2019-2020)</li> <li>• Development of relationships with educational institutions (schools and universities) to foster combined school/work and the entry of young people into the world of work</li> </ul>	<ul style="list-style-type: none"> <li>• Doubling the under-30 population by 2020</li> </ul>
<p><b>Improve management processes and personnel development</b></p>	<ul style="list-style-type: none"> <li>• Continuation of the unification process for the Group's Personnel management systems (attendance recording, unified information systems for performance management)</li> <li>• Continuation of a harmonisation process for the Group's supplementary agreements</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of the harmonisation process for company agreements</li> <li>• Digitalisation of processes in the Personnel area</li> <li>• Improvement of Change and Talent Management processes</li> <li>• Diffusion of the digitalised Performance Management system for over 50% of the company population by 2020</li> </ul>
<p><b>Implement the Iren Welfare System for all company employees</b></p>	<ul style="list-style-type: none"> <li>• Completion of the new welfare system for all Group employees (signing of a trade union agreement) with a portal, provider and other tools, and the possibility of allocating part of the annual bonus to the education, services and assistance for elderly family members and dependants, mortgages, health service, supplementary pensions, fringe benefits, recreation and assistance, identifying the areas of intervention mandated by Trade Unions on social and recreational levels</li> </ul>	<ul style="list-style-type: none"> <li>• Development of voluntary enrolment on the welfare system</li> <li>• Activation of the diversity programme</li> <li>• Smart working project</li> </ul>
<p><b>Engage and encourage the participation of personnel in sharing the policies and objectives for the maintenance of a Quality, Environment and Safety management system</b></p>	<ul style="list-style-type: none"> <li>• Raising the awareness of Departments via meetings dedicated to safety and the definition of actions for improving the analysis and monitoring of accidents and the identification of consequent corrective actions and/or improvements</li> <li>• Creation of regular reporting on the company accident trend</li> <li>• Implementation of an audit plan on production plants to detect any anomalies/critical issues concerning safety</li> <li>• Preparation and implementation of procedures for securing plants with evidence of the safety aspect assessment, also from an organisational perspective</li> <li>• Regular meetings between managers and operational personnel to raise awareness on safety issues and report near accidents</li> <li>• Preparation of control sheets for line management to check the correct execution of activities on site in regards to the safety profile of internal personnel and companies</li> </ul>	<ul style="list-style-type: none"> <li>• Development of existing synergies between the certified Safety and Management Systems departments with the aim of unifying group-level topics (for example, accidents, health supervision)</li> <li>• Completion of the development of unified risk assessment management through dedicated software</li> <li>• Introduction of a Group smartphone application to promptly report any near accidents and/or potentially hazardous situations via the app</li> <li>• Monthly integration of company indicator system with accident indexes regarding frequency, severity and type</li> </ul>

## CUSTOMERS

Objectives	Actions carried out in 2017	Future objectives
<p><b>Maintaining and strengthening its position in traditional areas, with the aim of creating strong links with the local community, also through events in collaboration with the main local cultural institutions and associations</b></p>	<ul style="list-style-type: none"> <li>• Extensive and diversified programme of events in the reference area, in collaboration with some of the main local cultural institutions and associations: adequate supervision for conducting commercial and marketing activities during big outdoor events (Gola Gola Festival in Parma, European Photography in Reggio Emilia and Summer Festival in Turin) which Iren was a sponsor</li> <li>• Creation, in collaboration with the other main opera theatres and other prestigious cultural bodies within the reference area, of events exclusively for customers affiliated with the Iren Mercato loyalty programme, via collective procedures via the Rush&amp;Win dynamic</li> </ul>	<ul style="list-style-type: none"> <li>• New events programme in the area to complement the marketing and sales activities, in synergy with the Group's sponsoring activities</li> <li>• Development of CRM with management functions for post-sales processes to guarantee a simplified user experience and an advanced customer experience designed around the needs and preferences of customers</li> <li>• Visibility of the advanced status of requests/procedures for the customer, also via the Web/App tracking area</li> <li>• Possibility for customers to carry out self-care operations via the Web or App, and to develop paperless processes</li> <li>• The possibility for customers to configure and sign their offer on the Web/App channel by selecting the contractual conditions</li> </ul>
<p><b>Increase commercial presence in the identified development areas thanks to the commitment to brand positioning and the connection with innovation and new downstream topics</b></p>	<ul style="list-style-type: none"> <li>• Return in communication with a focus on new brand positioning and product launches. Two campaigns conducted across the reference provinces via outdoor billboards, radio spots and inserts in the main local papers, with a focus on new home assistance products (Casa SenzaPensieri) and services dedicated to energy saving and safety (Domotica and CasaSicura). To clarify this new commercial inclination, the Iren Mercato logo was proposed to consumers with the tag line <i>Luce Gas e Servizi</i> (Electricity, Gas and Services)</li> </ul>	<ul style="list-style-type: none"> <li>• New communication campaigns to strengthen brand awareness and stronger synergies between publicity, promotion, local events and support for the sales team by enhancing the various communication channels</li> </ul>
<p><b>Develop the "new downstream" project both in historic areas and development areas: confirmation of Iren Mercato's role as extra-commodity supplier of added value services with the consequent brand positioning in reference to innovation topics</b></p>	<ul style="list-style-type: none"> <li>• Promotion of the "new downstream" project, bolstered by extensive promotional activity conducted at Iren Mercato service counters, with the creation of specifically dedicated physical exposition spaces and special sales initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidation of the "new downstream" project: extension of the product offers for energy saving and home automation, the development of innovative offer models with simultaneous new processes and new sales channels</li> <li>• Entry to the e-mobility market with the definition of various sales offers for the home automation, corporate and local authorities segments</li> </ul>
<p><b>Consolidate the Iren Mercato customer base through an extensive loyalty and retention strategy: caring campaigns directed at specific target segments and the further development of the Club Iren Mercato loyalty programme</b></p>	<ul style="list-style-type: none"> <li>• Launch of IrenConTe, Iren Mercato's new loyalty programme, an integral part of the wider project of churn reduction, thanks to ongoing loyalty-building advantages and engagement and participation mechanisms (experiential awards and mass marketing)</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance the IrenConTe programme: improvement of engagement and participation mechanisms for enrolled customers, new advantages, new reporting platform for constant monitoring of KPIs and the annual animation plan</li> </ul>

## SUPPLIERS

Objectives	Actions carried out in 2017	Future objectives
<p><b>Extension of the supplier performance monitoring system</b></p>	<ul style="list-style-type: none"> <li>• Supplier performance monitoring system with reference to: <ul style="list-style-type: none"> <li>- compliance with all occupational safety regulations and possession of all the safety requirements defined in the contract</li> <li>- compliance with all the environmental requirements defined in the contract</li> </ul> </li> </ul> <p>Each item generates a point, the sum of which contributes to changing the supplier's score upon entry to the portal</p>	<ul style="list-style-type: none"> <li>• Monitoring suppliers' performance and identifying gaps in the panel in regard to sustainability, based on the perimeter merceology and other parameters</li> <li>• Raising the awareness of suppliers on issues that arise and monitoring the improvements achieved</li> <li>• Transposition of legislative changes on the environment and safety into supplier qualification and assessment systems and procedures</li> </ul>





## COMMUNITY AND LOCAL AREA

Objectives	Actions carried out in 2017	Future objectives
<p><b>Growth in the quality and quantity of participated projects on sustainability, "incubated" by Local Committees</b></p> <p><b>Further dissemination of the IrenCollabora.it platform</b></p> <p><b>Extension of Local Councils and Committees</b></p> <p><b>Integration of CSR, Risk Management and 231 Monitoring/privacy processes within the strategic planning process</b></p>	<ul style="list-style-type: none"> <li>• Actions and initiatives to encourage stakeholders and local communities to engage in participatory planning of initiatives for environmental and social sustainability: the Iren Local Committees have "incubated" 11 new projects</li> <li>• Initiatives to increase users and exchange flows on the IrenCollabora.it. platform. At the end of 2017, the number of profiles registered reached 928, up by 30% compared to 2016</li> <li>• Launch of strategic planning that integrated sustainability objectives and targets within the 2017-2022 Iren Business Plan and the 2018 budget</li> </ul>	<ul style="list-style-type: none"> <li>• Continue qualitative and quantitative growth in participatory planning with stakeholders for the sustainability of the local areas</li> <li>• Continuation of the diffusion of the IrenCollabora.it platform and the planning developed through this with the aim of generating positive environmental and social impacts for communities</li> <li>• Activation of Local Councils and Committees in the Group's new geographic reference areas</li> <li>• Refining the objective definition process and sustainability targets within the strategic plan</li> </ul>

## SHAREHOLDERS AND FINANCIAL BACKERS

Objectives	Actions carried out in 2017	Future objectives
<p><b>Improve financial communication with the aim of extending the coverage of analysts to increase the visibility for the market and stakeholders of growth, efficiency and sustainability actions that have been implemented</b></p>	<ul style="list-style-type: none"> <li>• Increase the number of financial analysts that cover the stock thanks to entry of MainFirst, starting from January</li> <li>• Visits to financial markets that have never been entered by the Group before (Chicago and Luxembourg)</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation of Iren's equity story in financial markets that have not been reached as of yet, due to the Group's increased visibility and the significant increase in terms of capitalisation and results</li> <li>• Ongoing research into the excellence of financial communication through daily contact with analysts and fund managers</li> </ul>
<p><b>Maintain the Investment Grade rating</b></p>	<ul style="list-style-type: none"> <li>• Confirmation from the Fitch agency of the public rating Investment Grade improving by a notch to BBB for Iren S.p.A. and BBB for the bond issues</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of the Investment Grade rating</li> </ul>
<p><b>Continue with the coverage activities of financial requirements to support the investments with a balanced relationship between short and medium/long term funds</b></p>	<ul style="list-style-type: none"> <li>• Improvement and use of new medium/long-term loans for 550 million Euro, of which 500 million with a new public Green bond issue with a duration of 10 years</li> <li>• Completion of the BEI Reti Elettriche credit line for 75 million Euro</li> <li>• Update and extension of a bond issue programme (EMTN Program) up to a maximum amount of 2 billion Euro</li> <li>• Optimisation of the debt portfolio with liability management activities aimed at reducing the cost of debt</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation with the coverage activities of financial requirements to support the investments with a balanced relationship between short and medium/long term funds</li> <li>• Full compliance with the commitments undertaken within the Green Bond Framework to benefit Socially Responsible Investors (SRI), in line with Green Bond Principles</li> </ul>
<p><b>Optimise the debt portfolio also with liability management activities aimed at reducing the cost of debt</b></p>	<ul style="list-style-type: none"> <li>• Tender Offer transaction for 92 million Euro and early repayment of bank loans amounting to 253 million Euro</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of the optimisation of the debt portfolio also with liability management activities aimed at reducing the cost of debt</li> </ul>

## FUTURE GENERATIONS

Objectives	Actions carried out in 2017	Future objectives
<p><b>Capillary initiatives of disclosure and environmental education aimed at children and adults in the local areas of reference</b></p>	<ul style="list-style-type: none"> <li>• Include educational offers in the Edu.Iren catalogue, the result of collaborations with parties present in the local area</li> <li>• Extension of training offered beyond the school year</li> <li>• Trialling training courses with several parties (schools, associations and companies) within the combined school and work project</li> <li>• Enhancing projects promoted by Iren Local Committees</li> <li>• New pilot projects with companies in the local area on sustainability topics</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing collaborations with local and national parties to offer new training courses and tools</li> <li>• Transforming Iren environmental education from a traditional educational style into an advanced local communication tool</li> </ul>







## AWARDS AND RECOGNITION

In 2017, Iren Group received the following recognitions relevant to corporate and environmental responsibility.



Within the Top10 for Integrated Governance in 2017, Iren came in at fourth place, the best out of the medium-sized companies. The survey (promoted by TopLegal, ETicaNews, Methodos, Nedcommunity and Morrow Sodali) aims to measure the degree of sustainability integration within the company strategies of the top 100 Italian listed companies. Integrated Governance is the most innovative challenge that corporate governance faces, for both investors and stakeholders.



The CSR Online Awards conducted by Lundquist – which evaluated 254 European companies, of which 100 major Italian companies – Iren was the company that “spoke” the most about sustainability on Facebook and came third in regards to its presence and communication on social networks.



Utilitalia conducted a survey in 2017 on 97 member companies which aimed to identify actions and strategies undertaken in terms of equal work, work/life balance and organisational efficiency, with a particular focus on “female management”. The analysis highlighted that, while women in utilities represent a smaller percentage (around 20% of total employees) given the specific characteristics of the activities carried out, the female personnel at Iren Group is equal to 25% of total staff, coming out well above the average of survey participants.



In 2017, Iren received the “Technology, Research & Innovation” award from Top Utility, the think tank that studies public utility companies. The award was given for the “quantity and importance of the innovative projects launched in recent years and for its capacity to cooperate with other parties in research and development”, cutting across different businesses, also through an open innovation approach.



In the “Monitoring of responsible companies in Piedmont”, conducted by CSR Piemonte on over 1,000 companies that declare to have adopted sustainability practices within their business strategies, Iren Energia and AMIAT were selected from the most interesting 20 companies to include in the “excellency showcase”. A video was made for the two companies, detailing their experiences, which can be found on the CSR Piemonte portal, so as to spread the culture of corporate responsibility, to share the advantages and drive the growth of a responsible company network.



Three Iren Group projects came out amongst the best practices recorded by

Utilitalia in the “Utili all'Italia” (Useful for Italy) database. Out of the 80 projects selected – gathered in a volume on best practices in public services – Iren Group projects feature regarding the treatment plant in Golfo Paradiso di Recco, the saturation of district heating in Turin and the educational activity at the TRM waste-to-energy plant that encourages the active and direct participation of young people. The 80 “Utili all'Italia” practices were selected from 274 projects on corporate and environmental responsibility, technological innovation, energy efficiency and development.



The commitment to managing its social channels has earned Iren Group a nomination for the final of the prestigious Engage Awards in the “best use of social media” category. The British award recognises the organisational excellency of companies and people that have achieved important results within customer and employee engagement, crucial elements of any successful strategy.



ASM Vercelli (former Atena) received the “Good training practices” award from Fonservizi for its training plan, “Management adjustment system”. The award aims to shine a light on good human resources training and development practices.



# Iren value



## IMPORTANT TOPICS



Economic development and value for local areas



Competitiveness





## CREATING AND DISTRIBUTING VALUE

In 2017, Iren Group recorded economic results on the rise compared to the previous year: revenues +12.6%, EBITDA +0.7%, profit attributable to the Group +36.6%.

Economic indicators	unit of measure	2017	2016
Revenue	€/mln	3,697	3,283
Net Operating Margin	€/mln	820	814
Operating Result	€/mln	420	427
<b>Profit attributable to the Group</b>	€/mln	238	174
Total capitalisation	€/mln	3,191	1,991
Dividend per share	€	0.0700	0.0625

(1) Dividend proposed by the Board of Directors

The net financial indebtedness at 31/12/2017 amounts to 2,372 million Euro, down compared to the 2,457 million Euro at 31/12/2016.

Over the year, the Group made investments of over 357 million Euro (+32.4% compared to 2016) for development works in the various business sectors, guaranteeing an important contribution for local communities.

Investments (millions of Euro)	2017	2016
Generation and district heating	55.8	59.7
<b>Networks (electricity, gas, water cycle)</b>	207.4	148.7
Market	20.5	16.3
Environmental services	27.0	23.0
Others	46.7	22.3
<b>TOTAL</b>	<b>357.4</b>	<b>270.0</b>

The economic-financial performance shows – via a business portfolio with mainly regulated activities and an increase in investments – the Group's strong leaning towards the development of infrastructure to serve the growing economic systems of the areas served, and confirms its particular attention to environmental sustainability and innovation, as also defined in the 2022 Business Plan.

The focus of strategic guidelines on environmental and sustainability topics influences the multi-year investment planning that is to be done.

These same issues are part of the principles of the Code of Ethics that the companies of the Group are also required to comply with when making investments.

In the planning processes, the Group pays particular attention to the variables, emerging from economic and industrial scenarios of the sector, able to guarantee the medium and long-term availability of energy.

The analysis of the scenarios is carried out by a continuous monitoring of the industrial, economic and financial dynamics.

In planning production capacity developments, the Group considers scenarios in the medium term related to the electricity market, as well as the development of district heating fuelled by cogeneration. Additional possibilities emerge from regulatory scenarios that aid the growth of renewable energies. Maintenance programmes, on the other hand, have a temporary multi-year time frame and are defined by production, considering the requirements provided for each type of machine.

The energy generating facilities of Iren Group are efficient and appropriate in terms of size, thanks to the significant investments in new production capacity and in rendering those already existing more efficient. In order to guarantee the maintenance of adequate production standards and reliability, the Group implements advanced management and maintenance policies (i.e. predictive and preventive maintenance). The weak energy scenario and the recovery prospects in the medium-long term lead the Group to focus on innovation, increasing efficiency and flexibility of the plant and developing projects targeted at the energy efficiency of the system (flexibility of combined-cycle plants, management of waste-to-energy plants to seize opportunities of district heating development, installation of heat storage systems, the design of mini hydro plants). Planned production capacity is supplied 76% by cogeneration and thermoelectric plants, 22% from hydroelectric plants and 2% from other plants (waste-to-energy plants, photovoltaic, treatment plants).

Gas availability in the medium and long term is planned and ensured through the combined management of several sources: multi-year foreign procurement contacts, availability of foreign transport capacity that can be used on an event-basis and the annual availability of storage capacity. The combined use of these sources allows for natural gas demand to be met even during particularly harsh periods.

Planning is fundamental for guaranteeing the continuity, reliability and security of the integrated water service. This objective is overseen by the resource need analysis for the various areas, also in relation to their possible evolution and seasonality, and the attainment of diversion concessions that are proportional to the identified needs. This is complemented by the planning and management of ordinary and unscheduled maintenance and the renovation of plants and networks, the adoption of remote control systems and the automation of plants, a 24/7 emergency service, analytical checks and treatments to guarantee compliance with the qualitative requirements of the water supplied and the waste discharged from treatment plants.

In regard to waste management, at a plant level the production capacity and any revamping needs are assessed and planned. Specifically, for the recently-built Parma IEC no new scenarios are currently envisaged, also in consideration of the best construction technologies adopted and the environmental and energy

performance that are superior to those found in similar plants. For the Piacenza and Turin waste-to-energy plants, considering the specific plant type, planning is focused on the availability of energy in the medium and long term and on guaranteeing ordinary and unscheduled maintenance.

The Group has adopted a planning tool to guarantee the reliability of the electricity distribution network that defines the renovation, upgrading and extension rules and methods, for the main high-to-medium voltage transformer plants and networks. The renovation and updating plan for the main plants, which mainly aims to construct new main substations, includes quality and technical improvements of the grid layout and its adaptation to future load increases. In order to guarantee service levels and the reliability of plants, the plan is reviewed and updated in the event that new significant supply requests or reliability and stability issues emerge for the medium-voltage network or for the main plants. The effectiveness and quality of the interventions are assessed with the maintenance and/or improvement of service level indicators established by ARERA (former AEEGSI).

In gas distribution, the plan aims to contain leaks, which is the main objective for the safety, quality, efficiency and continuity of service. Regular ordinary and unscheduled maintenance and the renovation of plants and networks, scheduled searching for leaks, the maintenance of efficient and effective cathodic protection systems and the use of distributed monitoring systems, as well as constant supervision of plants and networks by highly qualified and constantly updated staff, all contribute to achieving this objective.

In the analysis of the scenarios at the planning stage, the Group also considers the impact produced by climate change trends: variations in the distribution of temperatures – that impact the consumer dynamics of heat and district heating, gas and electricity – and extremes of weather phenomena, such as droughts and floods.

These determine, in particular, effects on the hydrology of the hydroelectric plants and water distribution systems, with the associated economic implications, and also constitute factors of attention given the consequences that these may have on the Group's assets and on the planning of the availability and maintenance scheduled for thermoelectric power plants. For these reasons, the risks associated with climate change and natural phenomena occupy a significant position in the map of the Group's risks.

The financial implications that the Group constantly monitors are also those arising from the costs associated to the ETS (Emission Trading System) and from its regulatory evolution.

The Risk Management Department considers natural-catastrophe risks within its insurance programme, as well as accounting for the Group risk map, where these risks occupy an important position.

## CREATION OF ADDED VALUE

Iren Group produces value and carries out its activities using factors of production effectively, with the objective of generating added value compared to the external resources used.

The Group performs activities that, contributing to the economic growth of the social and environmental context in which it operates, produce significant indirect effects in the local areas, in particular in consideration of the investments undertaken and of the employment generated.

### *Iren Group generates economic outcomes in the areas of reference that contribute to the growth of the social and environmental context*

The activities of the Group, beyond their economic effects, also have important environmental repercussions through local development, development of basic infrastructures (electricity, gas and water system networks, water treatment plants and sewage systems) and essential services (waste collection and disposal). Moreover, all of the business areas present significant opportunities for the development of innovative technologies and processes and, consequently, for territorial growth, also in terms of know-how.

The Group contributes to the employment of the area in which it operates and generates added value, through actions aimed at increasing professional skills and at consolidating the improvements reached in the level of education. The Group has no specific local recruitment policy however, given the specific features of the Italian labour market, nearly all new recruits reside in the province where their place of work is located, while almost 80% of senior managers reside in the same region where their place of work is located.

### *Iren Group generates opportunities for the development of innovative technologies and processes and for the growth of territorial expertise*

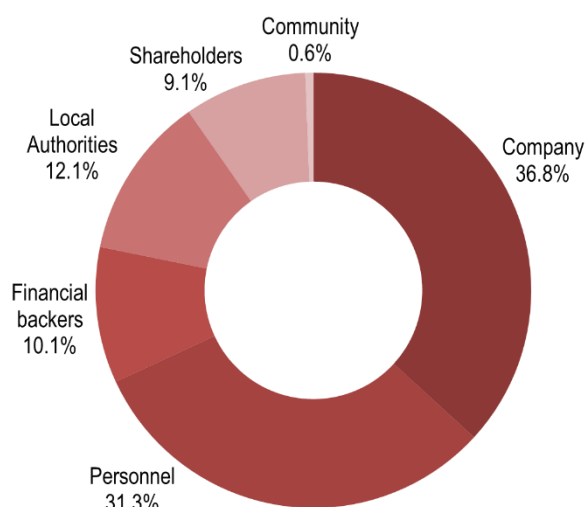
The indicator that highlights the ability of the Group to produce value within the area and, at the same time, satisfy the economic interests of its main stakeholders is Added Value.

This parameter measures both the economic performance of management and the ability of the Group to generate the conditions necessary to distribute wealth to the stakeholders of reference.

In 2017, Iren Group generated a total gross Added Value of 1,277 million Euro, up by 5% compared with 2016.



## DISTRIBUTION OF TOTAL GROSS ADDED VALUE TO STAKEHOLDERS IN 2017



The Added Value generated by Iren Group was allocated as follows:

- **36.8% to the Company** (approximately 470 million Euro). This portion is the share of wealth kept within the Group, inclusive of depreciation and undistributed profits;
- **31.3% to Personnel** (around 399 million Euro). This is the portion made up of salaries and wages, expenses and other personnel costs;
- **12.1% to Local Authorities** (over 154 million Euro). This is the portion distributed in the form of direct and indirect taxes, net of the grants received for the year;
- **10.1% to Financial Backers** (almost 129 million Euro). This portion includes all the financial charges due by Iren Group to its creditors;
- **9.1% to Shareholders** (over 116 million Euro). This is the portion allocated to shareholders in the form of dividends;
- **0.6% to the Community** (over 8 million Euro). This is the portion that the Group allocated to local communities through the participation in the development of social, cultural and sporting events.

Determination of Added Value (thousands of Euro)	2017
Revenues from goods and services	3,404,299
Change in work in progress, semi-finished products, finished products and goods	-32,918
Other income	225,622
<b>Production revenue</b>	<b>3,597,003</b>
Raw materials, consumables, supplies and goods	-1,238,512
Cost for services	-1,126,050
Other expenses	-59,373
Internal work capitalised	27,724
Provisions for risks	-78,002
<b>Intermediate production costs</b>	<b>-2,474,213</b>
<b>Gross added value from core business</b>	<b>1,122,790</b>
Non-core and non-recurring items	154,403
Net profit from discontinued operations	0
<b>Total gross added value</b>	<b>1,277,193</b>

## TAXES AND DUTIES

Regarding the portion of Added Value distributed to Local Authorities, a significant item is represented by the taxes and duties paid by Iren Group.

The income taxes for FY 2017 amount to over 104 million Euro, down by 11.7% compared to 2016. The effective tax rate is 28.3%.

In 2017 the Group received around 2.9 million Euro in benefits and grants from local authorities.

Taxes and duties paid (millions of Euro)	2017	2016
Government and Region	104.36	118.15
<b>Total direct taxes and duties</b>	<b>104.36</b>	<b>118.15</b>
ATO concession fees	3.01	0.85
Other concession fees	23.66	24.70
<b>Connection, taxes and licences (connection fees and surtaxes)</b>	<b>16.08</b>	<b>15.95</b>
Taxes and duties	20.19	20.26
<b>Total indirect taxes and duties</b>	<b>62.94</b>	<b>61.76</b>
<b>TOTAL</b>	<b>167.30</b>	<b>179.91</b>

# Environment



## IMPORTANT TOPICS



Emissions



Sustainable use of water resources



Biodiversity



Energy efficiency, renewable sources and district heating



Circular economy: management, collection and reuse of waste





# POLICIES FOR THE ENVIRONMENT

Due to the nature of its business and the focus of its mission, Iren Group has always concentrated heavily on sustainability and environmental protection. This commitment is reinforced and made clear with the Policies of the various companies that belong to the Group.

Guiding values, such as respect and protection for the environment, energy efficiency, the rational use of water resources, a reduction in energy consumption, the development of renewable sources and the proper management of the integrated waste cycle, are fundamental elements that direct the Group's strategic choices, as shown by the guidelines and objectives in the 2022 Business Plan.

In order to guarantee the pursuit of its environmental mission, the Group has adopted management systems, such as the ISO 14001, ISO 50001 and UNI CEI 11352 certifications, F-GAS certification and EMAS Registration. In addition to raising the awareness among its personnel via special training, the Group has also developed tools to monitor performance, such as the environmental impact/aspects assessment, analytical checks, internal audits and controls to check legislative compliance, which also aim to monitor performance in terms of sustainability and environmental protection.

## PRODUCTION PROCESSES AND PRINCIPAL ENVIRONMENTAL IMPACTS

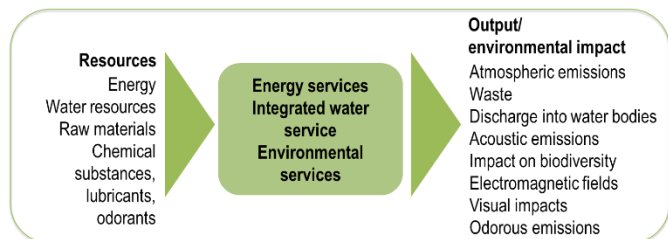
Iren Group activities which lead to direct and indirect environmental impacts include:

- **energy services**, i.e. thermoelectric production in both plants with traditional and cogeneration machinery and integration and back-up thermal plants; hydroelectric production; management

of high/medium/low voltage electricity distribution networks, lines and transformer substations;

- distribution of **natural gas**;
- management of the **integrated water service**;
- **waste collection, management and disposal** services, and related activities;
- **other customer services** (including electric mobility, energy efficiency and the new downstream project);
- **environmental practices** of contractors, subcontractors and other suppliers of the Group.

Resources are used in these operating areas for the management of operating activities and outputs and impacts are generated, as illustrated in the following diagram.



### DIRECT AND INDIRECT ENERGY CONSUMPTION

The **direct energy consumption** of the Group concerns the use of fuels, used for the production of electricity and heat at the plants (cogeneration plants, thermal plants, boilers, waste-to-energy plants and landfills), as well as the non-renewable primary energy flows not directly associated with the production of energy (i.e. heating, fuel for transport, etc.), used in carrying out its activities.

**Indirect energy consumption** (electricity purchased and consumed by the Group) refers to the sites and production plants. The electricity used by the energy production plants is partially self-produced and the relevant figures are included in the direct fuel consumptions. If the electricity used exceeds the amount self-produced, electricity is purchased from third parties and accounted for under the indirect energy consumption of the Group, which, in 2017, amounted to 54,761 TOE (293 GWh).

Direct energy consumption by energy source	unit of measure	2017	2016	2015
Natural gas	m <sup>3</sup> /000	1,541,325	1,558,452	1,367,173
Natural gas <sup>(1)</sup>	TOE	1,288,317	1,302,866	1,142,957
Diesel	t	107	143	738
Diesel	TOE	109	154	797
Landfill biogas	m <sup>3</sup> /000	21,940	28,395	31,798
Landfill biogas	TOE	7,460	9,654	10,811
Treatment plant biogas	m <sup>3</sup> /000	4,655	4,782	4,584
Treatment plant biogas	TOE	2,421	2,439	2,338
Fuel for motor vehicles	t	5,744	6,504	6,298
Fuel for motor vehicles	TOE	5,828	6,986	6,760

<sup>(1)</sup> The figures for 2015 and 2016 were restated as the conversion factor was modified.

## WITHDRAWAL OF WATER

Water is supplied to the Group sites through the withdrawal of water from the following sources:

- water mains;
- groundwater pumped from wells;
- surface water bodies.

Water withdrawal by source (m <sup>3</sup> ) <sup>(1)</sup>	2017	2016	2015
Drinking water	4,560,173	5,103,693	5,418,642
Untreated water	515,204,464	485,537,330	420,631,230
<b>TOTAL</b>	<b>519,764,637</b>	<b>490,641,023</b>	<b>426,049,872</b>

<sup>(1)</sup> Note that estimates of withdrawals have been made for certain months, when there were no updated invoices, and for some small hydroelectric plants

Iren Group, aware of the value and scarcity of water resources, pays particular attention to the implementation of initiatives to reduce water withdrawal for industrial and civil use as summarised in the table below.

Use	Water Source	Withdrawal reduction initiatives
Net energy output	Surface water: 3 withdrawals for the cooling of plants and 47 switches for hydroelectric production Groundwater: 16 withdrawals from wells for industrial use	In thermoelectric production (in particular at the Torino Nord plant) second-flush rainwater recovery systems are present as well as condensation from air refrigeration input to the gas turbine. The industrial water recovered is used for firefighting purposes, to supply the demineralised water production installation and for plant-related services.
Waste treatment and disposal	Groundwater: 12 withdrawals from wells 1 reservoir	Water for domestic/civil use is withdrawn from aqueducts, while water for industrial use (for example, for cooling, demineralised water production, firefighting and technological services) comes from groundwater not suitable for drinking, where possible. Priority is given to the recovery and recycling of water to save water resources at source and limit the impact on public treatment systems (for example, the use of wastewater to shut-down combustion slag).
Gas distribution	Water mains: 89 withdrawals	In order to reduce the water used for gas humidification for distribution, systems were introduced to lower the temperatures for the pre-heating of the gas in the distribution substations.
Integrated water service	Surface water: 1,146 groups of springs, 81 superficial water captures and 7 reservoirs Groundwater: 536 well fields	Various optimisation systems are in place for water withdrawal necessary for the treatment and purification of drinking water, for the flushing of networks and wastewater treatment plants. In particular, a project to implement district divisions and the monitoring of water mains networks has been launched, also with the aim of reducing water withdrawals from the environment for drinking water distribution.

The main production sites of the Group have implemented a certified Environmental Management system (UNI EN ISO 14001) and are in possession of EMAS registrations; therefore, they have various procedures for the management of water resources, which represent an operating instrument to follow in dealing with issues related to withdrawals and discharges. The procedures are applicable:

- to the various types of production processes and/or supplies of services, which require the use of the “water” resource, even for a secondary purpose;
- to water withdrawal of any type and purpose (surface, ground water, from aqueducts);
- to treatments and qualitative modifications of the resource water made for any reason;

- water discharges of any kind, purpose and origin (civil or industrial), to soil, subsoil, surface water bodies and sewers.

In energy production, each activity and operation regarding the use of water sources is regulated by the provisions of the law or authorisations with the responsibility lying in the hands of the Legal Representative of the Company or Managers, provided with specific powers of attorney and proxies, who have the task of managing and supervising the correct performance of the activities and the correct application of the procedures. Moreover, the “environmental analysis” document, prepared for each site/plant, allows for the identification of the environmental aspects related to water resources and the obligations foreseen by environmental legislations. The analysis also identifies the applicability of the legislation to Iren Group plants as well as the compliance with the regulations in force.



The integrated water cycle service supply plan is elaborated on the basis of effectiveness and efficiency criteria and in compliance with the regulations and resulting concessions. The criteria for the use of the resources take account of: authorised quantities, the size of the reserves in the main reservoirs, the quality of the surface water, the hydrological features of the basins, the data relating to the previous year and data relating to the current year. The supply plan can be reviewed or updated on a monthly basis following an analysis of the data collected during the measurement and monitoring activities in the phases of the process.

In regards to ordinary and unscheduled maintenance of the property, a water consumption reduction programme is in place, which uses the insertion of flow reducers and flow systems that are

differentiated for sanitary use and accurate analysis of water consumption to implement renovations in order to save water.

## WATER DISCHARGES

The activities carried out at the production sites of Iren Group generate water discharges of industrial and domestic wastewater. The most important water discharges result from:

- industrial discharges (including water used for the cooling of plants);
- water treatment (in addition to the wastewater treated, includes process water from production and purification systems, which do not contain particular pollutants);
- waste management and treatment.

Water discharges (m <sup>3</sup> ) <sup>(1)</sup>	2017	2016	2015
Cogeneration plants and boilers	300,341,030	252,714,237	206,777,737
Thermoelectric plants	209,435,653	227,508,336	208,761,474
Waste-to-energy plants	362,788	366,234	131,521
Chemical physical treatment plant	136,190	223,150	287,887
Waste compacting plant	19,808	27,180	20,122
Self-wash <sup>(2)</sup>	28,880	35,086	32,483
Industrial use for the integrated water service	7,377,867	N/A	N/A

<sup>(1)</sup> The volumes of water that pass through the hydroelectric plants are not given.

<sup>(2)</sup> It should be noted that discharges from car washes in Parma and Vercelli are not included, as they are not fitted with separate meters.

## WASTE PRODUCTION

Environmental protection is also achieved through responsible management of the waste produced by the Group during its activities.

The figures of waste produced are communicated on a yearly basis to the Chamber of Commerce through the MUD environmental declaration form (*Modello Unico di Dichiarazione Ambientale*).

The production of waste comes mainly from management activities and ordinary and unscheduled maintenance of:

- energy production plants and waste-to-energy plants;
- electricity, gas and water distribution networks;
- company sites and buildings.

Systems of separated waste collection, aiming to increase material recycling, have been installed in all Group sites. Policies limiting the use of paper have also been drawn up and implemented through dematerialisation projects and computerisation of processes.

Waste management and disposal occurs in compliance with the laws in force. Most of the waste produced is treated and recovered (treatment, recycling, reuse, composting and recovery of material).

Waste produced	2017		2016 <sup>(1)</sup>		2015 <sup>(1)</sup>	
	t	%	t	%	t	%
Hazardous waste	38,317	8	32,813	7	15,052	4
Non-hazardous waste	415,299	92	433,745	93	323,562	96
<b>TOTAL</b>	<b>453,616</b>	<b>100</b>	<b>466,558</b>	<b>100</b>	<b>338,614</b>	<b>100</b>

<sup>(1)</sup> Data for 2016 and 2015 have been restated with the final figures obtained from the MUD declarations.

Waste disposed of <sup>(1)</sup>	2017		2016 <sup>(2)</sup>		2015 <sup>(2)</sup>	
	t	%	t	%	t	%
Disposal/treatment	107,713	24	149,146	32	155,607	46
Incineration	20,879	4	16,896	4	10,606	3
Recovery/recycling	325,029	72	300,977	64	172,401	51
<b>TOTAL</b>	<b>453,621</b>	<b>100</b>	<b>467,019</b>	<b>100</b>	<b>338,614</b>	<b>100</b>

<sup>(1)</sup> The difference between waste produced and disposed is due to temporary deposit.

<sup>(2)</sup> Data for 2016 and 2015 have been restated with the final figures obtained from the MUD declarations.

## ATMOSPHERIC EMISSIONS

The activities of Iren Group generate atmospheric emissions both directly, from production, and indirectly, from the supply of electricity from third parties. Reporting will therefore consider:

- **scope 1:** all direct greenhouse gas emissions from sources owned by the Group; i.e. CO<sub>2</sub> emissions generated from fuels burned at the plants for the production of energy and heat, those originating from the company fleet/owned vehicles and those deriving from natural gas consumption to produce heat for the heating systems of the various office buildings and/or other activities that support production;
- **scope 2:** CO<sub>2</sub> emissions from indirect consumption of the Group; i.e. emissions generated from the purchase of electricity, consumed in Iren plants and offices, from third party suppliers;
- **scope 3:** all of the emissions that, although connected to the specific activity and business, are not directly controlled by the Group. Specifically, Iren reported the emissions generated from the transport of waste produced by the Group and sent for recovery/recycling.

Direct CO <sub>2</sub> emissions – Scope 1 (t)	2017	2016	2015
<b>Direct emissions from production plants</b>	<b>3,407,588</b>	<b>3,389,106</b>	<b>2,794,034</b>
- of which from cogeneration, thermal and thermoelectric plants	3,006,661	3,024,222	2,667,544
- of which from waste-to-energy plants (non-biogenic portion)	400,846	364,681	126,354
- of which other combustion reactions for process uses or services	81	203	136
<b>Other direct emissions</b>	<b>8,265</b>	<b>5,839</b>	<b>5,315</b>
<b>Emissions from company vehicles</b>	<b>13,991</b>	<b>13,343</b>	<b>12,418</b>
<b>TOTAL</b>	<b>3,429,844</b>	<b>3,408,288</b>	<b>2,811,767</b>

Direct biogenic CO <sub>2</sub> emissions (t)	2017	2016	2015
<b>Direct emissions from production plants</b>			
- of which from waste-to-energy plants (biogenic portion)	417,207	379,566	131,511
- of which from landfills and treatment plants	21,551	18,238	21,776
<b>TOTAL</b>	<b>438,758</b>	<b>397,804</b>	<b>153,287</b>

Total emissions of CO <sub>2</sub> (t)	2017	2016	2015
Scope 1 <sup>(1)</sup>	3,429,844	3,408,288	2,811,767
Scope 2 <sup>(2)</sup>	97,157	94,639	82,126
Scope 3 <sup>(3)</sup>	1,300	1,204	690
<b>TOTAL</b>	<b>3,528,301</b>	<b>3,504,131</b>	<b>2,894,583</b>

<sup>(1)</sup> Calculated by multiplying fuel consumption with emission coefficients, for example: natural gas 1.956 t CO<sub>2</sub>/1000 SCM, diesel 3.155 t CO<sub>2</sub>/t (source: national inventory of CO<sub>2</sub> emissions UNFCC).

<sup>(2)</sup> The figures for previous years were restated. The factor that was previously used only considered the thermoelectric source, while the new factor 332 gCO<sub>2</sub>/kwh (Source: ISPRA) considers the mix of the various electricity production sources purchased.

<sup>(3)</sup> Calculated by multiplying the tonnes of waste sent for recovery/recycling with the emission factor (4 tCO<sub>2</sub>/t). The data for 2016 and 2015 were restated as the figures concerning the waste produced by the Group and sent for material recovery were rectified.





Other atmospheric emissions from production plants concern sulphur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>) and particulates:

Atmospheric emissions (t)	2017	2016	2015
SO <sub>x</sub>	6.31	4.60	5.35
NO <sub>x</sub>	765.62	765.51	613.37
Particulates	12.57	18.94	9.88
CH <sub>4</sub> <sup>(1)</sup>	6,824.01	8,709.60	9,841.25

<sup>(1)</sup> Note that the data for 2016 and 2015 were restated.

## EMISSIONS OF OZONE-DEPLETING SUBSTANCES (ODS)

Substances harmful to the ozone layer are normally present in the coolants used in air conditioning and refrigeration systems. The only harmful substance used by Iren Group is R22 (chlorofluoromethane), which is present in plants either owned by the Group or managed for third parties (e.g. air-conditioner cooling circuits).

Emissions of this substance are monitored on the basis of the quantities of coolant added following periodic maintenance checks (topping up).

To prevent the release of substances harmful to the ozone layer from the Group's air-conditioning systems, all the measures laid down by Italian Presidential Decree no. 147/06 have been implemented. All equipment was therefore registered, indicating the gases they contain and the respective quantities and these are subjected to periodic checks to ensure that there are no leakages, as well as to check its correct functioning and cleanliness.

*Ozone depleting substances are periodically monitored by specialised technicians of the Group*

## MANAGEMENT OF EQUIPMENT CONTAINING PCB

Polychlorobiphenyls (PCBs) are persistent and bioaccumulative toxic substances used as insulators in transformers and other electrical devices.

In Iren Group, the data regarding the number of devices and the quantity of insulating oil contained in them are recorded and catalogued. Such data is then periodically updated, also when the devices are dismantled or decontaminated, in accordance with the company's current electrical equipment management procedures. The environmental performance improvement programme, in the field of electricity distribution, includes the objective of gradually reducing the number of electrical devices containing PCB/PCT contaminated oil. The goal is to keep the annual trend of steady disposal until the elimination of all of the devices contaminated by PCB/PCT.

In 2017, 26 devices containing oil contaminated with PCBs at a concentration between 50 and 500 parts per million (ppm) were decommissioned and sent for disposal.

*The data on PCBs are constantly updated and all devices that contain them are currently being decommissioned*

The weight of the oil containing PCB present in the transformers sent for disposal in 2017 is given in the table.

Oil containing PCB disposed of (kg) <sup>(1)</sup>	2017	2016	2015
with PCB content of over 0.05%	0	0	0
with PCB content between 0.005% and 0.05%	5,019	4,935	8,605
<b>TOTAL</b>	<b>5,019</b>	<b>4,935</b>	<b>8,605</b>

<sup>(1)</sup> The total amount of oil containing PCB in the transformers and other equipment as at 31/12/2017 is equal to about 67,600 kg.

## SIGNIFICANT SPILLS

There were no significant accidental spills in 2017.

## NOISE AND MEASURES TAKEN TO REDUCE THE ACOUSTIC IMPACT

Iren Group employs specialised technicians to carry out activities of monitoring, assessment and mitigation of noise emissions for the entire life cycle of their installations and infrastructures. In regards to acoustic pollution reduction – a very sensitive issue and subject to attention by citizens – the Group devotes its efforts and resources to reducing the noise caused by its activities, also using acoustic mitigation works (i.e. soundproof panels and silencers).

To check that the limits laid down by current legislation are respected, specific Acoustic Impact Assessments were carried out on the local population at each production site. In cases where the specified limits were exceeded, acoustic decontamination measures were taken on the most significant sources to bring the noise emitted below the legal limit. Periodic phonometric tests are also carried out at the perimeters of the sites or in proximity of the sensitive receptors; moreover, upon receiving reports or complaints from citizens, we implement appropriate measurements to assess the need for specific mitigation measures.

The campaigns carried out to measure the impact of noise produced on the surrounding environment by the **gas distribution** plants did not identify any critical areas. In 2017, some generator sets were replaced with four silenced sets in the Genoa area and some soundproofed substations were purchased and installed in the Vercelli area.

Concerning the **distribution of electricity**, there were no critical situations of exceeding the allowable noise limits. Therefore, it was not necessary to create noise mitigation systems at the main electricity transformer plants.

The subject of reducing the acoustic impact is normally not particularly relevant for the **integrated water service**. Despite the above, during the unscheduled maintenance interventions for machinery and equipment (compressors, grills, etc.), these are replaced with others having a lower acoustic impact or a greater degree of soundproofing.

Lastly, regarding **environmental services**, phonometric tests are periodically carried out on waste collection, street sweeping and collection centres. Waste-to-energy plants are periodically monitored for noise impact.

## ELECTROMAGNETIC FIELDS

For several years now Iren Group has been measuring electromagnetic fields, which involve:

- primary electricity power plants and stations;
- overhead and underground HV power lines;
- MV/MV and MV/LV electricity substations installed in schools, hospitals, parks, or with specific load characteristics;
- MV/LV electricity substations with a higher capacity;
- office buildings of Group Companies.

The safety and electromagnetic fields of the operational new/renovated substations are checked every month. Specifically,

a technical safety inspection is carried out, combined with the results of the Electromagnetic Fields measurements. During the inspections, the location of the substation is checked, as well as the electrical equipment it contains with respect to any sensitive adjacent buildings and any potentially hazardous situations found in the substation that are environmental, electrical, etc. in nature. In 2017, 8 inspections were carried out on 44 newly installed or renovated substations.

Any required measures are also carried out on the EMF of electricity distribution plants after receiving complaints or petitions. No complaints or petitions were received in 2017.

## MATERIALS USED

Separated process materials that are purchased from external suppliers are used in production and service processes. They include, but are not limited to, products for cooling and lubricating plants and machinery, substances for treating water, reagents for waste treatment and waste-to-energy processes.

In 2017, the Group used 68,759 t of process materials in total, of which 21,246 t of renewable materials.





# REDUCTION OF EMISSIONS AND ENVIRONMENTAL IMPACTS

## INVESTMENTS FOR THE ENVIRONMENT

Iren Group undertakes, with responsibility and with the use of human and economic resources, a commitment to reduce its impacts and protect the environment. The expenses and investments incurred in 2017 for environmental protection amount to over 232 million Euro and included:

- improving the performance of electricity and thermal energy production plants and lowering the environmental impacts of plants by installing atmospheric emission reduction systems;
- optimising and making separated waste collection systems more effective in order to pursue the waste recovery objectives defined in the territorial area plans;
- renovating the water and sewage network, the water meters and the treatment plants and attaining hydroelectric green certificates;
- a renovation plan for electricity distribution substations, lines and networks;
- renovating the gas network, cathodic protection, renovation of meters, the rising mains, sockets and user connections, distribution network improvement projects (smart city and EMMA).

## REDUCTION OF EMISSIONS

The Group carefully monitors atmospheric emissions (measurements on chimneys, indirect calculations, number of leaks, etc.) in order to identify specific measures to reduce them and verify the results achieved on a regular basis.

The generation of electricity from renewable sources creates significant positive effects on the reduction of emissions; moreover, the predominant cogeneration framework (production of electricity

and thermal energy that feeds the district heating networks in different cities) of the Group's thermoelectric plants significantly contributes to containing specific greenhouse gas emissions.

*In 2017, renewable sources, cogeneration and separated waste collection have made it possible to reduce emissions by almost 2.8 million tonnes of CO<sub>2</sub>*

In order to reduce pollution, only natural gas is used to supply the energy production plants and both low emission combustion systems and pollutant reduction systems are installed (catalysts for the reduction of CO and NO<sub>x</sub>).

Continuous emission monitoring systems make it possible to detect in real time the main pollutants and the improvement of the efficiency of the combustion process of cogeneration plants, larger thermal plants and waste-to-energy plants. The latter are also required, pursuant to the relevant Integrated Environmental Authorisations (IEA), to comply with stricter emission limits than those contained in national legislation.

Pursuant to the IPPC environmental legislation and relevant IEAs, it is mandatory for power plants with a capacity exceeding 50 MW to continually improve environmental services, by updating to the best technology available in order to continually reduce the pollution for the different environmental compartments, including atmospheric emissions.

Moreover, ozone depleting substances are being progressively replaced at corporate sites with substances that have a lesser impact.

The total combustion of the biogas produced in landfills produces the maximum reduction of methane and other greenhouse gas emissions, although its conversion into CO<sub>2</sub> has a potential greenhouse effect 21 times lower than natural gas (Source: UNI ISO 14064).

The CO<sub>2</sub> emissions avoided thanks to energy production and separated waste collection are given in the table below. In 2017, almost 2.8 million tonnes of CO<sub>2</sub> were avoided.

Emissions of CO <sub>2</sub> avoided <sup>(1)</sup> (t)	2017	2016	2015
Cogeneration, district heating and thermoelectric plants	1,397,406	1,329,859	1,317,145
Hydroelectric and photovoltaic	558,731	644,907	792,041
Waste-to-energy plants and landfills <sup>(2)</sup>	166,359	135,004	62,293
Treatment plants <sup>(3)</sup>	2,904	3,684	4,043
Separated waste collection <sup>(4)</sup>	631,132	544,225	477,373
<b>TOTAL</b>	<b>2,756,532</b>	<b>2,657,679</b>	<b>2,652,895</b>

<sup>(1)</sup> The calculation of CO<sub>2</sub> avoided considers as a parameter of reference the emissions of the domestic electric system equal to 491.789 kgCO<sub>2</sub>/MWh (data elaborated by Tema and PNA) and the performance of the national electric system 1,760 kcal/kWh (datum Tema).

<sup>(2)</sup> The calculation of CO<sub>2</sub> emissions avoided is performed considering the quota of production of the electricity referable to renewable sources, for 51% (source: GSE) of total production, multiplied by the conversion factor 491.789 kgCO<sub>2</sub>/MWh (national energy mix data). In the case of the IEC, that also produces thermal energy, the emissions of CO<sub>2</sub> avoided are calculated by converting thermal energy into electricity (for IEC=1/6.88) and applying the above-mentioned formula.

<sup>(3)</sup> The figures for 2016 and 2015 were restated as the quantity of biogas burnt off was not considered.

<sup>(4)</sup> For the calculation of CO<sub>2</sub> avoided for separated waste collection, the correlation between the tonnes of waste recycled for the most important categories (paper and cardboard, plastic, organic and green, wood, iron, glass) and the tonnes of CO<sub>2</sub> equivalent saved were analysed (Source: Waste management options and climate change EC-AEA 2001).



Emissions of NO <sub>x</sub> and SO <sub>x</sub> avoided <sup>(1)</sup> (t)	2017	2016	2015
Nitrogen oxides (NO <sub>x</sub> )	676	3,007	2,700
Sulphur oxides (SO <sub>x</sub> )	2,306	2,821	2,444

<sup>(1)</sup> The calculation was made considering the emissions that, in equal quantities produced, would have been generated by the production of thermal energy from building boilers and the electricity production of the domestic electric system. The actual emissions produced by cogeneration plants and supplementary and reserve boilers of the Group were subtracted. Nitrogen oxide emissions avoided fell significantly due to the emission factor of the domestic thermoelectric system being updated (source: "Studio degli impatti sulla qualità dell'aria del sistema di teleriscaldamento di Torino [Study on the impacts on air quality of the Turin district heating system]", Politecnico di Torino University).

## INITIATIVES TO MITIGATE ENVIRONMENTAL IMPACTS

The Group has undertaken many initiatives to reduce the environmental impacts of its main activities.

### ENVIRONMENTAL SERVICES

All Group **waste-to-energy plants** are equipped with emission-monitoring systems that check both emissions from the energy and heat production plant and the waste combustion process. The monitoring system is guaranteed by continuous measurements and checks on compliance with legislation and the Integrated Environmental Authorisation with the control of the indicated substances.

At the Turin waste-to-energy plant in 2017, the equipment was upgraded with two analysers for processing mercury, providing all three lines with a dedicated instrument for monitoring this parameter.

In regard to the containment of the biogas emissions from **landfills**, cycles of internal control are carried out for the regulation of the valves at the top of the biogas collector wells with measurement of the collection efficiency of the plant.

Other sector initiatives are listed below.

**Electricity Consumption Collection Centres:** in the Emilian area, actions continued to limit the operation of the air conditioning and heating plants to only the hours in which the centres are open. The increase in consumption registered in 2017 is attributable to the high temperatures that characterised the summer season.

	2017	2016	2015
Electricity (kW)	455,567	425,382	425,525

**Replacement of roll on/off compactors:** the programme provides for the replacement, where possible, of roll on/off compactors powered by diesel with similar electrical equipment. In 2017, 14 new compactors were purchased, of which 9 replaced the traditional devices, with a subsequent reduction in both acoustic emissions and pollutants in the atmosphere.

	2017	2016	2015
Compactors substituted (%)	68	54	49

At the same time, the project to replace part of the traditional blowers powered by endothermic motors with electrical equipment continued. Over 50% of this equipment, which is used to support sanitation activities, is equipped with fully electric motors.

### INTEGRATED WATER SERVICE

When managing the integrated water service, the initiatives aimed at reducing the environmental impacts mainly concern:

- the reduction of energy consumption by adapting wastewater treatment processes and replacing old machinery with the latest generation equipment that consumes less energy;
- the replacement of submersed electric pumps of the pumping stations with new pumps fitted with inverters;
- the reduction of water procurement through the reduction of water mains leaks;
- improving the quality of the water that leaves the treatment plants and the connection of stretches of untreated sewage to final treatment systems;
- reduction and containment of odorous emissions at treatment plants.

*Public water dispensers have allowed over 1,930 tonnes of CO<sub>2</sub> to be avoided, equal to over 1,400 TOE*

The public water dispensers for the free distribution of drinking water (chilled or sparkling) to the residents made it possible to considerably reduce the use of plastic bottles (over 21 million 1.5 litre bottles in 2017) and, therefore, the production of waste. Savings of CO<sub>2</sub> for the production of the bottles can be estimated. The CO<sub>2</sub> avoided in 2017 was 1,937 tonnes due to the non-consumption of 1,414 tonnes of equivalent crude oil.

### GAS DISTRIBUTION

The main environmental impact from the gas distribution network is the leakage of methane gas into the atmosphere. To guarantee the safety, quality and continuity of service levels, the Group has adopted distributed monitoring systems (for example, remote control) and intrusion detection systems, as well as ongoing scheduled research and ordinary and unscheduled maintenance of networks and substations.

## MOBILITY MANAGEMENT

The Group is committed to reducing the atmospheric emissions from the use of vehicles through the systematic renewal of the vehicle fleet and the promotion of initiatives for employees, aimed at encouraging the use of public transport and alternative transport methods to arrive at the workplace.





Company vehicles: atmospheric emissions (t) <sup>(1)</sup>	2017	2016	2015
Atmospheric emissions of NO <sub>x</sub>	66.13	64.25	61.16
Atmospheric emissions of VOC	2.08	2.21	2.32
Atmospheric emissions of CO <sup>(2)</sup>	25.87	27.41	28.57
Atmospheric emissions of PM10	3.80	3.73	3.55
Atmospheric emissions of CO <sub>2</sub>	13,991.34	13,342.58	12,417.76

<sup>(1)</sup> The emissions are calculated multiplying the km travelled by the vehicles (broken down into different Euro categories, type of fuel and vehicle and divided by territory) by the emission coefficients of NO<sub>x</sub>, VOC, CO, PM10, CO<sub>2</sub> (source ARPA). Travel distance data were taken from the management software in use. The distances are measured using the final data of the files of the companies supplying the fuel with relevant controls on evident anomalies. The data regarding CO<sub>2</sub> emissions connected to vehicle traffic for the transport of waste by suppliers is not yet available for 2017. The inclusion of new specifications obligating all companies to use E4 or E5 vehicles or those with a low environmental impact is still in place.

<sup>(2)</sup> The data regarding CO emissions for 2016 and 2015 have been restated.

Company vehicles as at 31/12/2017 (n.)	2017	2016	2015
<b>Number of hired or owned company vehicles<sup>(1)</sup></b>	<b>3,880</b>	<b>3,866</b>	<b>3,907</b>
of which Euro 1, 2, 3	1,022	1,244	1,357
of which Euro 4, 5, 6	2,562	2,299	2,130

<sup>(1)</sup> The total does not correspond to the amount of the Euro categories because it also includes conventional vehicles and those without a Euro category.

In 2017, the campaign continued to replace obsolete vehicles and those below Euro 4 with Euro 6 vehicles for over 200 vehicles. The choice of company cars for private use also favoured vehicles with lower emissions than the previous car thanks to “eco” options and the decrease in power and engine size.

The management of vehicles is performed pursuant to the corporate guidelines that define levels of safety, maximum distances travelled and levels of replacement in relation to total distances travelled, the age of the vehicle and level of wear and tear, together with the changing operating needs or the management synergies between the different areas of operation.

In light of the trials carried out, a new drive towards the adoption of fully electrical vehicles has been included within the new 2022 Business Plan: this envisages the purchase of around 450 electric vehicles (cars and vans) over the Plan period, equal to 100% of the vehicles that can potentially be replaced. In 2017, the first 33 vehicles were purchased for operative needs and the infrastructural works was begun at headquarters with recharging columns and wall boxes.

Furthermore, 15 vehicles were purchased with the intention of upgrading the long-distance fleet. The selected cars come with advanced security systems and assisted driving. This upgrade is part of a wider project to improve safety, reduce emissions and optimise the use of the vehicle fleet.

The Group also promotes various initiatives to reduce these movements and encourage the use of less polluting means of transport:

- it is possible for employees working in Genoa to purchase passes for public transport at discounted prices and also on instalments, while in Turin it is possible to purchase public transport passes on instalments charged on salary;
- the “Ecoviaggio Smart” project, which offers employees the possibility of organising transfers and business trips through

car sharing (“I like sharing”). In 2017, an app was introduced that allows employees to book cars from their smartphones, in addition to the company Intranet. Ecoviaggio Smart, which from 2018 will allow personal bonuses to be acquired that can be used on the Iren Welfare Portal, allowed around 51 t of CO<sub>2</sub> to be saved in 2017, the equivalent of around 22 TOE;

- telecommuting employees reduced their home-work commutes by almost 300,000 km, with savings of around 45 t of CO<sub>2</sub>, equivalent to around 21 TOE.

Due to the positive impacts on the reduction of commuting, focus is increasing on the use of self-learning courses (on-line courses that can be accessed from personal computers), as well as the development of tele/videoconferences.

*The Ecoviaggio project and teleworking have led to around 96 t of CO<sub>2</sub> being avoided, equal to around 43 TOE saved*

The Group participates in the distribution of electric mobility within the Emilia area, thanks to the agreement with the Region of Emilia Romagna, the Municipality of Parma and other electricity distributors for the development of a network infrastructure for recharging electric vehicles.

In 2017, 11 recharging columns were active for electric vehicles, placed in strategic areas for the urban mobility of the city of Parma.



# INTEGRATED WATER SERVICE

## WATER PRODUCTION AND DISTRIBUTION

The procurement of water for the distribution of drinking water is carried out in accordance with effectiveness and efficiency criteria, as well as in compliance with regulations and resulting concessions. The procurement plan accounts for a complex series of factors (authorised quantity, reserves of the main reservoirs, water quality, the hydrological features of the basins, data relating to the financial year) and may be reviewed or updated every month on the basis of the analysis of measurement and monitoring data of the phases of the process.

The total volume of water supplied to the network in 2017 amounted to over 253 million m<sup>3</sup>, the same as the previous year.

Water fed into the network (thousands of m <sup>3</sup> ) <sup>(1)</sup>	2017	2016	2015
Piacenza	32,857	33,154	32,159
Parma	40,178	42,872	42,518
Reggio Emilia	44,827	43,088	42,834
Vercelli	8,446	5,751	n.a.
Genoa	102,231	102,940	96,813
Savona	20,093	20,628	23,354
Imperia	3,927	3,734	N/A
La Spezia	911	940	N/A
<b>TOTAL</b>	<b>253,470</b>	<b>253,107</b>	<b>237,678</b>

<sup>(1)</sup> The data does not provide the figures for areas served in Piedmont (excluding Vercelli), Valle d'Aosta, Lombardy and Veneto – which represent around 5% of the inhabitants served by the Group – where the data collected is currently being processed. 2017 volumes are given in accordance with ARERA's new calculation method: the time trend is therefore influenced by the gradual substitution of the previous calculation method based on Italian Ministerial Decree 99/97.

The percentage of network leaks stands at 27.6% compared to the national average of 40.66% (last figure available: 2017 Water Management Report of the Politecnico Milano University). The figure is down compared to the previous year, which - on the basis of the new ARERA calculation method (Decree 5/2016) - is equal to 29.4%.

### AM.TER. managing the Genoese water service

The integrated water service in Genoa is completed by AM.TER., which provides services to 7 municipalities and over 46,000 residents. In 2017, around 3.9 million cubic metres of water was sold and distributed across a 290 km network. AM.TER. also manages sewage services (126 km of network) and treatment plants (14 plants).

## SEWERAGE AND THE QUALITY OF WATER TREATMENT

Urban wastewater from public sewers is treated at 1,171 treatment plants of various types and capacities. Pretreatment to remove large particles, sand and oils, and primary treatment to remove sedimentation solids, takes place in the main plants, as well as

traditional secondary and tertiary treatments to remove nitrogen. The Group also manages some phytotreatment plants, which exploit the plants' ability to absorb contaminants and these systems are used both to treat sewage (subsurface flow system), and to purify water treated in traditional treatment plants (surface-flow systems).

Wastewater treated (thousands of m <sup>3</sup> )	2017	2016	2015
Emilia Romagna	98,368	63,992	66,280
Liguria <sup>(1)</sup>	58,495	55,223	52,567
Piedmont <sup>(2)</sup>	7,168	3,036	n.a.
<b>TOTAL</b>	<b>164,031</b>	<b>122,251</b>	<b>118,847</b>

<sup>(1)</sup> For Liguria, the Group does not handle sewage and treatment in the Savona area.

<sup>(2)</sup> From 2017, in addition to Vercelli, the provinces of Alessandria and Asti are also included, where the Group also manages the treatment service.

In 2017, the amount of wastewater treated rose by over 30% due to a variation in the calculation method: not only were the main Group treatment plants considered, but also all plants with a flow rate of over 2,000 equivalent residents served.

The performance of treatment plants in 2017 are given in the table below.

Pollutant reduction by geographic area (%)		2017
Emilia Romagna	COD reduction	92.82
	BOD reduction	97.47
	TSS reduction	96.32
Liguria	COD reduction	88.95
	BOD reduction	92.38
	TSS reduction	92.56
Piedmont	COD reduction	94.05
	BOD reduction	96.86
	TSS reduction	96.82

*1,171 treatment plants managed by the Group contribute to improving the conditions of rivers, torrents and seas*

## WATER BODIES RECEIVING TREATED WASTEWATER

All the water bodies receiving wastewater treated by the Group in the Emilia and Piedmont areas lie in the basin of the Po River. The land lies in an area declared as sensitive and so the plants, depending on their size, are subject to the application of the strictest nitrogen and phosphorus limits.

The wastewater treated by the treatment plants situated in the city of Genoa is drained into the sea off the coast of the Ligurian Sea (Gulf of Genoa and Gulf of Tigullio).



# ENVIRONMENTAL SERVICES

## WASTE COLLECTION

In 2017, Iren Group managed the urban waste collection service in 145 municipalities in the provinces of Parma, Piacenza, Reggio Emilia, Turin and Vercelli, serving a catchment of over 2.1 million inhabitants in which over 1.2 million tonnes of urban waste was collected.

## SEPARATED WASTE COLLECTION

Of the 1,208,373 tonnes of urban waste collected, 731,840 tonnes were collected separately.

The implementation of the door-to-door collection service continued across the entire area, alongside the traditional roadside collection systems, and allowed for this important result to be achieved.

In the system provided for residents to increase results from separated waste collection, of particular importance is the presence of 145 Waste Collection Points where it is possible to freely deposit waste in large containers. The range of services is completed by the domestic collection of bulky waste and the services for companies operating in this field.

The separately collected waste is sent for recovery through specialised platforms and industry sectors on the basis of agreements made between Iren Group and the members of Conai (National Packaging Consortium), or private operators if the materials are different from those managed by the members of the consortium.

*In 2017, 731,840 t of waste were collected separately*

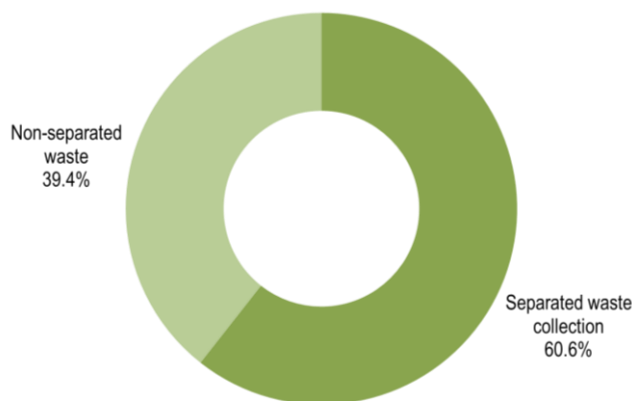
The percentages of separated waste collection achieved in 2017 show a positive trend across all areas, with the exception of the Province of Piacenza. In particular:

- in the **Province of Parma** the results on the Municipalities served went from 76.2% in 2016 to **78.4% in 2017**;
- in the **Province of Piacenza** the figure fell by 63.1% from 2016 to **59.0% in 2017** for authorisation reasons connected to selection plants, overcome at the end of the year;
- in the **Province of Reggio Emilia** the figure went from 66.9% in 2016 to **69.8% in 2017**;
- **Turin** increased significantly, going from 42.9% in 2016 to **44.3% in 2017**;
- **Vercelli** went from 66.2% in 2016 to **67.2% in 2017**.

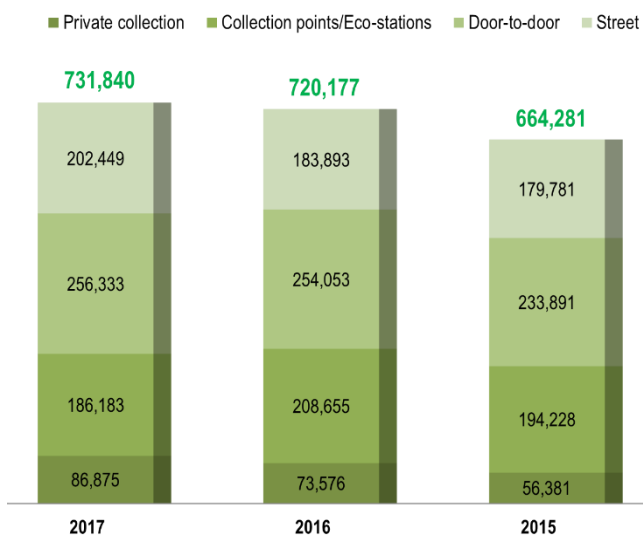
The average of separated waste collection across the area served by the Group came out at 60.6%, compared to the national of 52.5%, a figure that exceeds the objectives set for 2025 by the European Union's Circular Economy Package. In line with the directives of the sector and the local programmes (Environment Plans, Provincial Waste Management Plan, etc.), the Group has defined in its Business Plan its commitment to achieving a further

increase in the percentage of separated waste collection, introducing new home collection services, also introducing new exact pricing systems, aiming at an even greater promotion of environmental awareness among citizens, and sending 100% of urban waste collected to be recovered as material or energy.

In terms of quality goals, plans are in place to further develop the collection of paper and cardboard, from the organic fraction and the vegetable fraction.



## WASTE FROM SEPARATED WASTE COLLECTION BY METHOD (t)



## WASTE TREATMENT AND DISPOSAL

In order to guarantee an effective management of the entire cycle, Iren Group is also committed to the treatment and disposal of waste, the recovery of material and the exploitation of the resource waste for the generation of electricity, heat and biogas through:

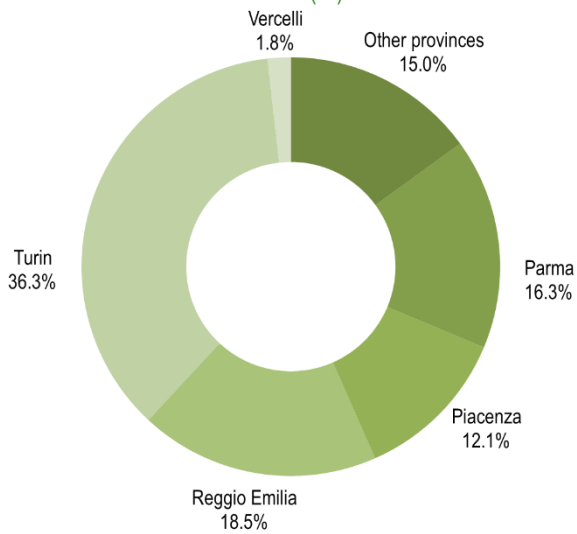
- 11 treatment, selection and storage plants;
- 3 waste-to-energy plants;
- 5 chemical, physical and biological treatment plants;
- 1 treatment plant for soil from street sweeping;
- 1 WEEE recovery treatment plant;
- 2 compost plants;
- 3 landfills.

In 2017, a total of 2,015,568 tonnes of waste were managed.

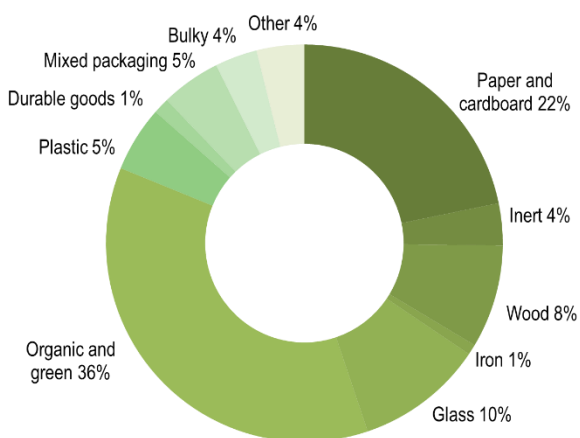
**WASTE MANAGED (t)**



**WASTE MANAGED BY AREA (%)**



**WASTE SENT FOR RECOVERY BY TYPE (%)**

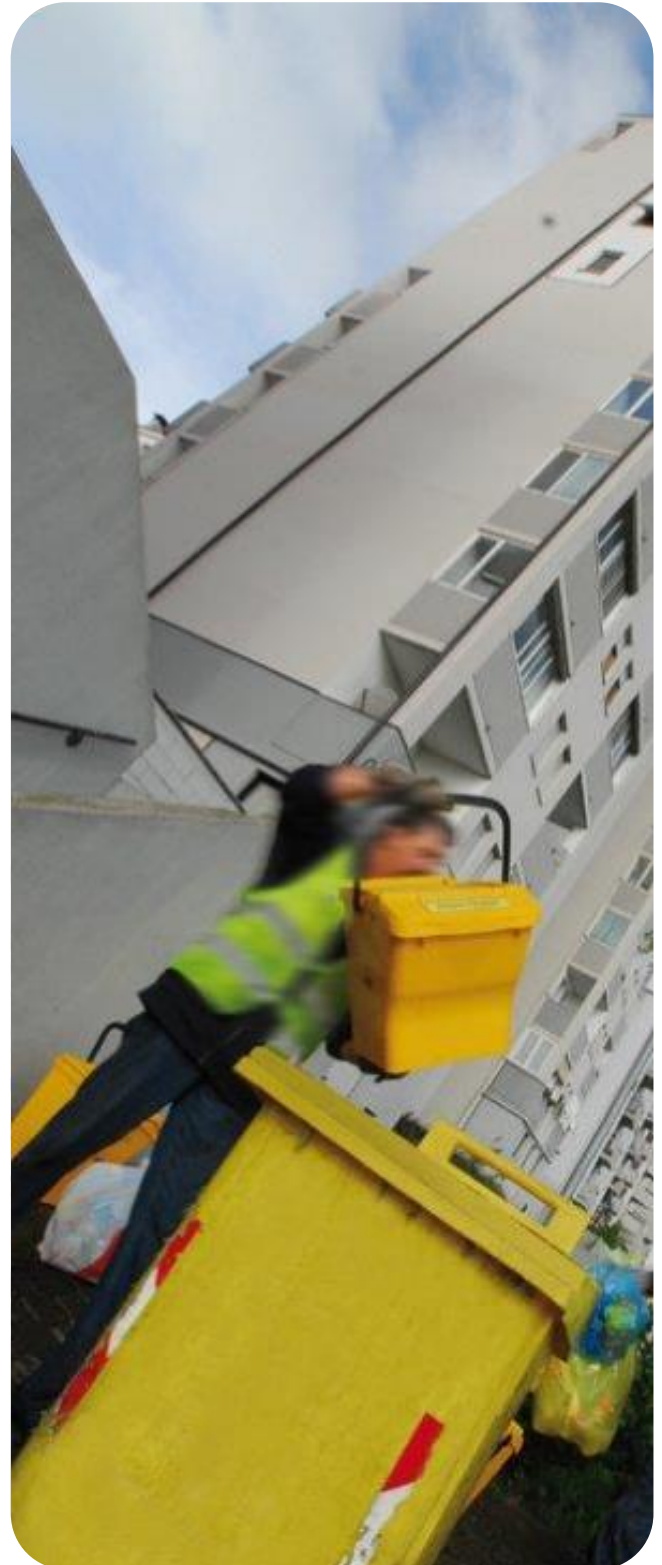


The separated waste can be sent directly for recovery or via the Group's storage plants or points where it is sorted and/ or treated before reaching its final destination.

The non-separated waste is disposed of in several different ways in order to make the most of the waste as a resource, with the

waste-to-energy process seen as the most environmentally effective solution for energy recovery.

The Group also carries out a preventive mechanical sorting process with the goal of intercepting a wet fraction rich in organic material that can be stabilised biologically.







## ENERGY PRODUCTION AND SERVICES

Energy saving is one of the Group's main objectives, is included in the 2022 Business Plan and is pursued throughout all its Business Units, also thanks to the creation of solutions that guarantee energy savings for stakeholders, as well as via technological systems and by monitoring and advising on proper consumption behaviour. The Energia Business Unit carries out a similar activity within the Group to manage consumption along the production chain and monitor the targets set out in the Energy Budget.



## RENEWABLE AND SIMILAR SOURCES

86% of energy production plants (compared to the national average of 37.3%) are powered by renewable sources (hydro or solar) or integrated (cogeneration). Iren Group's virtuous production processes result in significant energy savings in terms of TOE and, consequently, CO<sub>2</sub> emissions avoided, which came to 2,756,532 t.

*Producing energy from hydroelectric and photovoltaic plants reduces environmental impact*

### Iren Rinnovabili: clean energy production

Iren Rinnovabili operates within the sector of energy efficiency and energy production from renewable sources and also develops projects and systems in the photovoltaic, hydroelectric, biomass and wind sectors. It currently manages 72 photovoltaic plants (installed capacity: 17.3 MW) and a hydroelectric plant with a nominal capacity of 1 MW. In 2017, these plants produced 21,323 MWh and 4,815 MWh of electricity respectively and allowed for 12,854,380 t of CO<sub>2</sub> atmospheric emissions to be avoided.

With regard to its **hydroelectric production**, in 2017, the Group developed the following projects:

- *new Noasca plant* - the project involves the development of a new 1.2 MW hydroelectric plant in the Municipality of Noasca (Turin), through the reactivation of an old plant built in the twenties and then decommissioned in the sixties. The authorisation process is being completed in order to receive the final single authorisation for the construction and operation of the plant (Italian Legislative Decree 387/2003). Expected production is approximately 3 GWh/year and will be subject to an application to obtain the incentives provided for renewable sources by current legislation;
- *new Dres plant* – the project consists of the construction of a new 1.2 MW hydroelectric plant in the Municipality of Ceresole Reale (Turin). Expected production is approximately 4 GWh/year and will benefit from the incentives provided for renewable sources. The authorisation process is under way;
- *reactivation of Giffoni plant* – the project consists of the reactivation of a 0.5 MW hydroelectric plant in the Municipality of Giffoni Valle Piana (Salerno). Expected production is approximately 2 GWh/year and will benefit from the incentives provided for renewable sources. In 2017, the Campania Region issued a favourable opinion on the project's Impact Assessment and its simultaneous exclusion from the Environmental Impact Assessment, which will be followed by the preliminary procedure to obtain the hydroelectric concession;
- *San Mauro weir* - the project entails the installation of a 1 MW generator set in the Municipality of Turin (Turin) and the simultaneous construction of an upstream ladder for fish. In 2017, a feasibility study was begun on the energy usage of the minimum vital flow (MVF) on the weir's cascade.

The constant commitment of Iren Group is to increase the efficiency of its plants, particularly the cogeneration plant connected to the continuously expanding **district heating** networks. In 2017 the following development projects were defined:

- *saturation of the Turin network* – the connection of a further 8 million cubic metres is expected by 2022, achieving a total volume of 64 million cubic metres in the area of Turin that will lead to the saturation of the capacity of the integrated district heating system, without the development of new production sites. In 2017, approximately 1.4 million cubic metres of volume was connected and approximately 7.4 km of network was laid;
- *extension Torino Nord phase 1* – the project involves the connection, in two phases, of about 5 million cubic meters of volumes. Phase 1, expected over 2016-2018, makes it possible to bring to saturation the residual capacity of the district heating system, through the optimisation of the storage systems. In 2017, approximately 612,028 million cubic metres were connected and approximately 4.5 km of network was laid;
- *Torino San Salvario* – the extension of the district heating network was completed and the authorisation process is being completed to construct a new heat storage system which will

allow around 2.5 million cubic metres to be connected. In 2018, works to lay the main backbones and to construct the storage system will begin;

- *TRM waste-to-energy plant serving the district heating network* - the project involves the connection of the TRM waste-to-energy plant to the district heating networks of the Municipalities of Grugliasco and Beinasco and the development of the plant interface at the TRM. Construction is expected between 2018-2019. The Municipality of Beinasco issued a call to tender to grant the use of land and subsoil for the development of a district heating network, which was won by Iren Group. Works to lay the backbones began in the last quarter of 2017 and will continue into 2018 and 2019. It is planned to connect approximately 500,000 cubic metres;
- *district heating in the city of Asti* – the project aims to develop, in collaboration with local operators, a district heating network spanning around 30 km and a trigeneration plant for the production of electricity, thermal and refrigerated energy. It is planned to connect over 2 million cubic metres, in addition to the hospital complex of Cardinal Massaia. Work is scheduled between 2018 and 2022. The investigatory processes are under way for the issue of the authorisations;
- *connection of the waste-to-energy plant in Piacenza and development of the district heating network* – the connection of the city district heating network to the Piacenza waste-to-energy plant is expected. The increase of the connected volumes will be approximately 1 million cubic metres, which will bring further environmental benefits due to the substitution of the domestic heat boilers and the gas savings currently used primarily to power the network. As the authorisations have been obtained, works to lay the connection backbone began in the last quarter of 2017 and will continue throughout the 2018-2019 period.

The timely management of the photovoltaic plants continued in 2017, which represent an important asset considering the commitment of the Group to produce clean energy.

In 2017, electricity production from the Group's waste-to-energy plants (Parma, Piacenza and Turin) rose by around 26% compared to the previous year, reaching a total of 574,401 MWh.

## EFFICIENCY AND ENERGY SAVING

Thanks to the high-efficiency cogeneration plant of Torino Nord, 75,640 energy efficiency certificates (EEC) are expected for the year 2017 (equivalent to an equal amount of TOE of energy savings). Iren Group, furthermore, has implemented various projects which resulted in 2,784 EECs in 2017. The requirement to produce (or purchase on the market) and supply energy efficient certificates to the GSE (Electricity Services Provider) is the sole responsibility of Ireti (distributor) and is valid for 2017 (with maturity 31 May 2018).

Green Certificates were replaced by equivalent incentives which matured with the following amounts for the Group's hydroelectric plants in 2017: Bardonetto (17,242), Pont Ventoux (265,765), Villa (33,664), Telessio - Eugio - Rosone (59,612), Telessio (5,474), Ceresole - Rosone (133,309), Brugneto (1,768), Tanagro (13,193) and Bussento (33,080). The TRM waste-to-energy plants (206,843) and the landfills of Poiatica (798), Rio Riazzone (363) and Basse di Stura (22,126) received the same incentives. In total, 794,105 former Green Certificate incentives matured last year.

*In 2017 Iren Group obtained energy efficiency certificates equivalent to 78,424 TOE*





Energy production and saving <sup>(1) (2)</sup>	unit of measure	2017	2016	2015
<b>Production from hydroelectric and photovoltaic plants</b>				
Electricity produced	GWh	1,136	1,259	1,499
Energy saved	TOE/000	200	227	281
Energy saved	GJ	8,370,190	9,515,456	11,746,765
<b>Production from boilers cogeneration and thermoelectric plants</b>				
Electricity produced	GWh	7,287	7,345	6,411
Thermal energy produced	GWh	2,865	2,738	2,769
Energy saved	TOE/000	283	305	333
Energy saved	GJ	11,860,704	12,752,370	13,935,058
<b>Production from waste-to-energy plants and landfills</b>				
Electricity produced	GWh	610	500	214
Thermal energy produced	GWh	131	130	103
Energy saved <sup>(3)</sup>	TOE/000	63	58	26
Energy saved	GJ	2,647,945	4,044,194	1,776,257
<b>Biogas plant production</b>				
Electricity produced	GWh	0.25	0.96	0.88
Energy saved <sup>(4)</sup>	TOE/000	1.24	1.57	1.74
Energy saved <sup>(4)</sup>	GJ	51,741	65,775	72,187

<sup>(1)</sup> The figures are calculated according to the following criteria:

- for cogeneration, boilers and thermoelectric plants, the comparison between gross production and actual fuel consumption of the Group with the consumption that the national electricity grid and the "national average" heat production system would have recorded to produce the same quantities of electricity and heat;
- for hydroelectric and photovoltaic energy production, the calculation was based on the assumption that there was zero fuel consumption and compared the consumption recorded by the national electricity grid for the production of the same quantities of electricity;
- for waste-to-energy plants and landfills, the amount of electricity and thermal energy production (for the Parma IEC the conversion coefficient for thermal energy to electricity is 6.88, modified compared to 2016) is multiplied by the electricity coefficient (187 TOE/GWh);
- for biogas plants, by multiplying the cubic metres of natural gas produced (60% of biogas) by the SCM/TOE conversion factor 0.836.

In some cases, the energy saved may increase/decrease in a manner that is not directly proportional to the increase/decrease in production, due to an increase of the specific consumptions used for calculations.

<sup>(2)</sup> Energy saved is also expressed in GJ by using a conversion factor of 1 TOE = 41.86 GJ.

<sup>(3)</sup> The figures for 2015 and 2016 were restated.

<sup>(4)</sup> The figures for 2015 and 2016 were restated as the calculation criteria was changed, subtracting burnt-off leaks from total biogas produced.

*Iren Group, through projects launched in 2017, achieved an energy saving of over 5,600 TOE/year*

In terms of **energy saving**, the Group has developed projects that generate external impacts and which allowed an annual energy saving of 5,594 TOE, described in the table below.

Project	Description	Savings obtained
<b>LED Lighting</b>	"Torino LED": replacement of approximately 53,000 lights with new LED lamps. In 2017 the project (fully financed by Iren in the scope of ESCO) allowed for 21,000 MWh of primary energy to be saved and around 11,000 t of CO <sub>2</sub> , equivalent to almost 4,000 TOE.	3,900 TOE
<b>Energy efficiency of buildings</b>	"Revamping 2014-2016": a project created on behalf of the Municipality of Turin concerning upgrading a large share of the municipal property and making it more energy-efficient: 183 buildings including 104 schools, representing 63% of the total volume heated. Work has been carried out on 333 boilers connected to 24 plants on the district heating network.	766 TOE
<b>Technological redevelopment of buildings</b>	Interventions to increase energy efficiency in private buildings: in 2017 Iren installed 350 thermostatic valves and heat allocators.	6 TOE
<b>Photovoltaic plants</b>	96 photovoltaic plants (total output 5MW) installed on the roofs of the buildings owned or available to the Municipalities of the province of Reggio Emilia. The project was fully operational from 2015, producing a yearly quantity of approximately 3,760 MWh.	700 TOE
<b>Reduction in energy demand for private customers</b>	As part of its projects with industrial customers, Iren Rinnovabili provides support to identify and plan plant interventions to reduce their energy requirements. Following the new interventions, which were monitored during 2017, a full net saving quota was achieved, amounting to 222 TOE, for which verification and certification was requested from GSE (Electricity Services Provider).	222 TOE



Other energy saving projects, which are related to company sites and plants, generate impacts within the Group that allowed an annual energy saving of 17 TOE.

These projects are described in the table below.

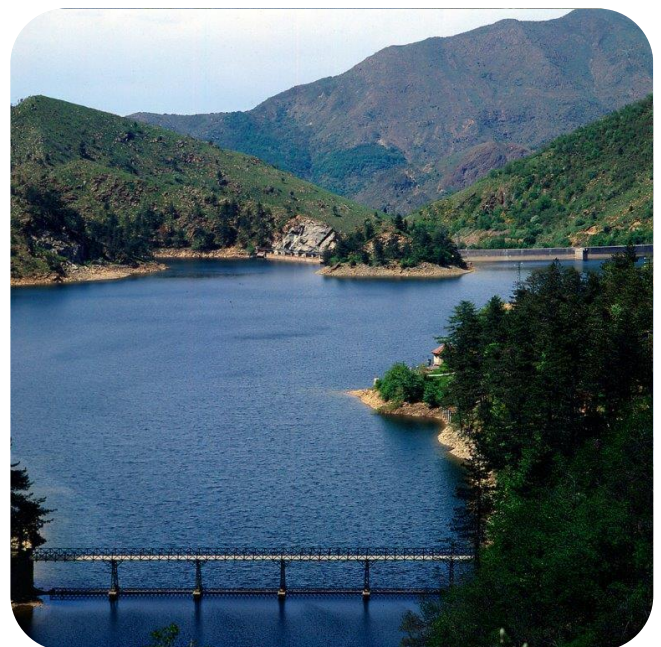
Project	Description	Savings obtained
<b>Energy efficiency of hydroelectric and thermoelectric production plants</b>	The improvement projects and actions for the energy efficiency of some hydroelectric and thermoelectric production plants include: the installation of electricity consumption monitoring systems, the replacement of lighting fixtures with LED lights and the replacement of high-efficiency motors and voltage stabiliser switchgears. In 2017 the first savings began to be recorded in terms of energy and emissions avoided. Based on energy audits carried out, it is estimated that, when steady state is reached, savings will amount to 7,085 MWh, equal to 1,325 TOE/year.	10 TOE (1,325 TOE steady state)
<b>Energy efficiency of buildings</b>	In 2017 a voltage stabiliser was installed at the Martinetto plant. Savings of 3-5% of consumption (60,000 kWh/year) are expected, around 11 TOE per year.	(11 TOE steady state)
<b>Efficiency-raising works at the Reggio Emilia headquarters</b>	The intervention concerned raising the efficiency of the light towers providing external lighting to the offices on Via dei Gonzaga (Reggio Emilia). The old plant was made up of six 18 m towers, each consisting of six 400 W high-pressure sodium lamps. The intervention updated and optimised the lighting equipment with the adoption of LED technology that allowed the installed capacity to be halved, while maintaining brightness levels that are in compliance with the levels imposed by UNI EN 12464-2.	7 TOE (70 TOE steady state)

## PROTECTING NATURAL HERITAGE

The continuing deterioration of natural habitats and threats to certain species are among the main issues considered by the European Union in its environmental policy, which attempts to ensure biodiversity through the conservation of natural and semi-natural habitats and of wild flora and fauna. For this purpose, an ecological network was created within the European Community of special protected areas, called "Natura 2000", which also involves various Italian territories and areas. In addition to almost uncontaminated natural habitats, environments transformed by humans that represent important areas for the survival of many animal and plant species are also included within the network. Protection of the "Natura 2000" sites is mandatory pursuant to the law (Italian Presidential Decree 357/97 and Italian Presidential Decree 120/2003) that provide that the territorial planning and scheduling must take into account the naturalistic-environmental importance of the Sites of Community Importance (SCI) and the Special Protection Areas (SPA) and that any plan or project which could in any way affect the conservation of habitats or species that have been identified as protected should be subjected to an appropriate impact assessment for the affected sites.

Before beginning new projects/measures and significant maintenance activities (revamping and repowering), which could lead to environmental impacts on "Natura 2000" protected areas, it is necessary to submit the project/measure for prior assessment in order to protect the area in which the measure is to be carried out. It is also necessary to verify that machinery, plants and equipment possess the environmental requirements necessary and to assess the potential impacts resulting from the use of hazardous

substances and the adoption of appropriate management measures. Specifically, the Impact Assessment is the procedure that is implemented in cases where a works project or intervention may significantly affect an SCI or an SPA. As the construction of the "Natura 2000" network is an ongoing process, the SCI lists are regularly updated once a year by the European Commission on the basis of the databases submitted by Member States.







## ACTIVITIES IN PROTECTED AREAS OR AREAS OF ENVIRONMENTAL INTEREST

**Electricity production** activities carried out by the Group in protected areas relate mainly to hydroelectric plants and their impact on water sources and on noise.

Water withdrawals and releases are managed in accordance with the concessions issued by the Competent Authorities and the legislation in force. For all managed reservoirs, Management Plans (pursuant to Italian Ministerial Decree 152) were prepared with the relative impact assessments for those that involve SCIs. Water discharges flow into the Ligurian Sea, the basin of the Po and Ticino Rivers, Lake of Pian Telesio in Piedmont and the Naviglio Grande canal in Lombardy. All discharges, authorised and in compliance with the law, are made up of cooling water from the plants or water from the treatment processes of the water used in production sites. The measures to improve efficiency of hydroelectric plants, carried out by the Group in the past, had positive repercussions on the entire system, as they reduce the need to produce energy from fossil sources and help to reduce atmospheric emissions. For all of the redevelopment work carried out, the plant IAFR certification (certifying that it is powered by renewable sources) was obtained, which identifies the environmental benefits expected in terms of reductions in SO<sub>2</sub>, CO<sub>2</sub>, NO<sub>x</sub>, particulate and natural gas emissions. In relation to acoustic impact, all plants are soundproofed appropriately to minimise the impact on the surrounding area. No natural habitats were offset during the reporting period.

The development of the **electricity distribution network** in the city of Turin may directly involve or be in the immediate vicinity of various areas of the "Nature 2000" network, including: Collina di Superga (SCI), Meisino (SPA) and Stupinigi (SCI).

The electrical distribution network of Parma does not affect SCIs or SPAs in the "Natura 2000" network.

**Waste management and environmental health** activities that the Group carries out do not affect protected areas in the Emilia area. Plants with greater capacity (waste-to-energy plants and landfills) are equipped with a green system, in harmony with the vegetation climax in which they are situated, with visual and environmental mitigation functions. The Parma Integrated Environmental Centre includes a "green system" that, in addition to complying with the mitigation of dusts, also plays an ecological role, restoring some habitats and acting as an ecological bridge between different biotypes that will lead to the creation of a surface ecosystem that could be an important resource for the overall recovery of the landscape and ecological value of the area. The Piacenza waste-to-energy plant is located in a zone free from protected areas. The waste-to-energy plant in Turin (TRM), despite being in the middle of an EIA phase, has no significant impact on the ecosystem and its emissions do not cause any harm to the local fauna, including areas of special natural interest (Stupinigi Natural Park and System of Protected Areas of the Po area region).

Activities concerning the **gas distribution** service do not have particular impacts on biodiversity. For the activities of construction,

maintenance and operation of the infrastructure, we comply with the regulatory framework relevant to environmental impact.

Regarding the **integrated water service**, the wastewater is drained mainly into the sea on the coast, which receives most of the volume produced, through offshore pipes. In the sea duct projects, interference with protected marine areas is assessed and minimised: even outside of protected areas, attempts are made to minimise environmental impact on habitats considered to be of particular interest and value, such as Posidonia oceanic seagrass. In Liguria, improvements were made, and are planned for the future, in the treatment process and, therefore the preservation of the marine water ecosystem. In 2017, in order to improve environmental conditions, the discharge of urban waste - that used to flow into the Polcevera Stream (Genoa) - was channelled into a pipeline that allowed for discharge into the open sea, beyond the sea wall of the port, at the depths and distances provided for by law. The primary objective of purification is to treat and make discharges compatible with the neutral habitats of the receiving water bodies. Screening and environmental impact assessments are carried out as required by applicable law, for treatment plants and withdrawal of water.

The Genoese plants of the Brugnato Dam lie within Antola Regional Park (Genoa), while the Gorzente lakes lie within the Regional Park of Capanne di Marcarolo, the part within the Province of Alessandria. In the Province of Piacenza, the Group owns a lowland forest within the protected area of Conoide del Nure and Bosco di Fornace Vecchia (SCI).



## MAIN AREAS AND SPECIES PROTECTED

Iren Group constantly collaborates with the Management Bodies of the protected areas in which it works to safeguard the ecosystem and protected species.

The map shows the main Sites of Community Importance and Special Protection Areas where plants and/or networks managed by Iren group are located.

There are around 250 protected species listed in the national and international IUCN Red List that live in the areas where the Group operates. Species that live in the land/sea or river areas (National and Regional Parks, lakes and rivers) in the vicinity of where the company manages its business were taken into consideration.

Over 30% of these fall under the following IUCN List categories: regional extinction (RE), vulnerable (VU), endangered (EN), critical risk (CR), nearly threatened (NT).





## COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS AND REPORTING MECHANISMS

Iren adopts an Environmental Management System in compliance with ISO 140001: all Iren Group employees are required, as part of their duties, to participate in the process of risk prevention, protection of the environment and of their own, and that of their colleagues and third parties, health and safety. Iren activities are managed in compliance with the regulations relevant to the prevention and protection from accidents and safety at work.

For Iren, environmental protection represents a basic value in order to satisfy one of the primary needs of the individual citizen and the entire community. All of the processes are carried out in full compliance with applicable environmental legislations. Moreover, the Group contributes to the research and development of advanced technologies aimed at protecting the resources and at reducing the environmental impact of the activities and their related risks.

There are many instruments at the disposal of the stakeholders to report an environmental breach: these methods include written communications via mail, e-mail, fax and social media channels. All communications are considered and each stakeholder receives a response regarding what it has reported. Written reports are logged and forwarded to the relevant departments, which provide to undertake the appropriate investigations.

During the qualification process, suppliers are required to hold an environmental certificate or, in any case, to have taken on substantial elements interlinked to the environmental system (for more information, please see page 108).

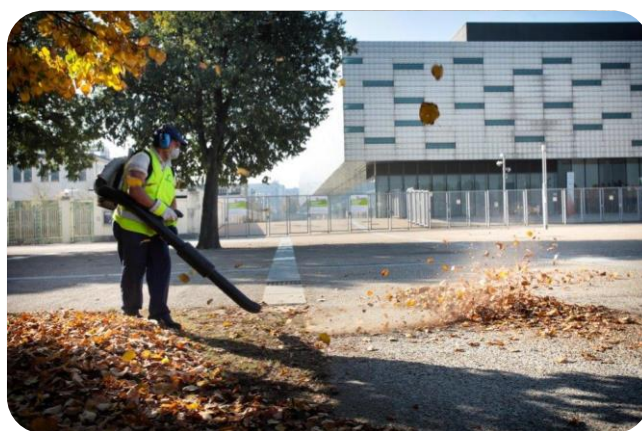


The **production and distribution of electricity** services are certified by standards of quality and environmental management, and are, therefore, subject to internal and external audits with regard to the processes and the obligations relevant to environmental legislation.

With regards to **environmental services**, an environmental contact centre is available to residents, public authorities, etc., where it is possible to report any breaches and/or critical situations pertinent to the environment. Moreover, “Environmental

Inspectors”, active in the provinces of Piacenza and Parma (and which are currently being extended to Reggio Emilia), patrol the areas of competence in order to identify illegal landfills and abandoned waste, including those hazardous to the environment (i.e. asbestos cement, spills, etc.). Reports are taken on in order to organise the verification activities and the necessary treatment for the resolution of the identified problems, pursuant to the proper procedures. Furthermore, specific procedures provide exact guidelines for operators concerning the processes to be carried out for the solution and/or limitation of any environmental emergencies that may arise during the performance of services.

In relation to **waste-to-energy plants**, emission data are released to the control authorities in real time. These figures are public and can be viewed daily on websites and on other screens located in the areas. To ensure IEA provisions on communicating anomalies are adhered to, a 24-hour technician service has been established.



Regarding the **integrated water service** the entire cycle is subject to the constant monitoring of operating parameters, including by means of remote control systems for important plants, and provides for the execution of tens of thousands of analytical laboratory calculations. The water service is also subject to controls pursuant to the law by local regulatory authorities. The optimisation of the corrective measures put in place to minimize possible negative effects of problems identified, is often carried out through the involvement of other agencies, including through specific operational protocols.

In 2017, the Group received and paid 56 fines and penalties, for a total value of around € 70,000, for failure to comply with mandatory environmental laws and regulations, including exceeding the limits set out in the tables, late submission of data and failure to comply with authorisation and waste management regulations.

# Customers



## IMPORTANT TOPICS



Efficient and reliable services



Responsible management of business segments



Marketing policies



Service levels offered and customer focus



Internal and external communication





## RELATIONS WITH CUSTOMERS



## POLICIES AND PRACTICES

### BUSINESS CONDUCT

Iren Group fully complies with the guidelines of the Code of Business Conduct for the sale of electricity and natural gas to end customers, formulated by the Italian Regulatory Authority for Energy, Networks and Environment (ARERA, formerly AEEGSI). The ARERA regulates sales outside of commercial premises, i.e. activities conducted by door-to-door companies and at commercial stands as well as teleselling and webselling to promote energy contracts. Communications to customers comply with the principles of clarity and transparency provided by the Code of Ethics and Code of Business Conduct, with the objective of placing the customer in a position to be able to make an informed choice.

Within the contractual relationship, Iren Group requires that external promotion companies (door-to-door companies, telesellers and websellers) comply with sector regulations and procedures as well as those identified and elaborated by the Group. More specifically, it requires compliance with the Code of Business Conduct of ARERA (formerly AEEGSI), the Consumer Code, the Group's Code of Ethics, Iren Mercato's 231 Model and Iren Mercato's Quality Policy. During the selection phase, a meticulous analysis of the requirements is carried out, including the possession of all authorisations, licences and subscriptions for pursuing the agency activities, the availability of a back office to monitor and train agents, preliminary verification of contracts acquired and customer awareness. The stipulation of the agency contract also includes a trial period. All company collaborators receive appropriate training on: regulations governing the sector, codes of conduct to adopt, offer types, features of the commercial products and offers proposed, behaviour to be complied with when in contact with potential customers, unacceptable behaviour that is subject to penalties, as well as the quality check processes carried out by Iren Mercato before activating every single contract. A specific section has been created on the commercial portal for training, which allows for distance learning and training sessions to be recorded.

The activity of the companies is monitored and controlled at various levels and in different ways depending on the type of activity performed. The control systems for contract promotion are more stringent than those laid down by law and sector practices, with the aim of pursuing transparency and effective protection of customers' wishes. Controls are conducted via quality calls concerning the activity carried out by the door-to-door companies to confirm contact with the agent and that the contractual agreement was signed. With regard to telesellers (and activities deriving from webselling), a third party is appointed to make calls to check customers' awareness concerning the telephone proposal accepted (welcome calls and confirmation calls). Visits to external commercial bodies are made regularly, the results of which are analysed to continuously improve processes. Customers who subscribe to telephone contracts are given the option of listening to their telephone recording by accessing a dedicated section on the company website with personal login details.

The organisation of Iren Mercato also provides for a specific structure for responding to customer complaints and a dedicated structure for the analysis of complaints concerning external channels of sale, which can result in the charging of penalties and, in more serious cases, the dismissal of the individual agent, up to the possible closure of the agency mandate. In regard to customers and potential customers, sales and marketing activities are conducted in full compliance with the sector regulations concerning personal data protection (Italian Legislative Decree no. 196/2003) and in accordance with the principles of honesty, transparency, safety and confidentiality of the data itself. Specifically, Iren Mercato:

- guarantees that the personal data of customers and potential customers will be used in compliance with the consent they provided;
- in the event that the personal data of customers and/or potential customers are processed by third parties on Iren Mercato's behalf, the third parties shall be appointed as data controllers;
- provides customers and/or potential customers with a specific privacy policy, drafted pursuant to current legislation, across all its sales and/or promotional channels;
- guarantees that customers can access their personal data and update, rectify and/or change and/or delete it.

The data protection and privacy management system for natural persons was structured centrally within the Group, with the objective of adapting it to the provisions of new European Regulation 679/2016 that will come into force on 25 May 2018. A single data protection Representative has been identified and appointed within Iren Group, who reports to the Internal Audit and Compliance Department. A specific adaptation project for the aforementioned regulation has been under way since the second quarter of 2017.

### HEALTH AND SAFETY OF CUSTOMERS

Iren Group implements actions to minimise the impacts that their activities have on the health and safety of customers and the community. Below is a summary by business segment.

**Environment:** containers for waste collection comply with safety regulations for the public and Group personnel. In 2017 the replacement of the pre-Euro 4 vehicle fleet with Euro 6 vehicles continued, in order to adapt to the most recent atmospheric emission legislation. Health supervision campaigns are activated for the most environmentally critical plants: we only need to mention the waste-to-energy plant for waste in Parma, Piacenza and Turin that are equipped with specific certifications (see page 121).

**Energy:** the management model adopted considers the health and safety of customers, assessing environmental aspects; the analysis and measurement of risks during all stages of the services supplied, from plant planning to maintenance; as well as the activation of new services and the selection, storage and disposal of materials and products that require specific certificates and targeted laboratory tests.

**Integrated water service:** considering the crucial importance of the water resource, health and safety are the pillars of each phase of the drinking water supply process, through continuous checks, also beyond legal obligations, on the quality of the water along the entire supply cycle. Similar attention and analytical monitoring are in place for each wastewater treatment and disposal stages of sewage sludge.

**Gas distribution:** customer safety is the main issue concerning the management of the gas distribution service. In addition to normal operating procedures for minimising risk, the main tools range from odourisation and planned searching for leaks, to continuous monitoring thanks to remote control systems, as well as 24/7 information/report gathering from the customer and the availability of Emergency Service teams. These elements are subject to constant analysis and improvement measures in order to continuously increase their effectiveness.

**Electricity distribution:** significant activities are carried out for the measurement and containment of emissions from electromagnetic fields (described in detail on page 63) and technical inspections and random checks are performed on a yearly basis on almost half of the electricity substations. Newly constructed substations also undergo spot checks to verify that the position of the substation, and the electrical equipment contained within, do not impact on adjacent structures.

**District Heating:** in 2017, the Polytechnic University of Turin, at the request of Iren Group, conducted a study to assess the consequences in terms of the air quality of the Turin district heating system. The study compared the current situation (2016), on the one hand, with a previous scenario in which there is no district heating, and – on the other hand – a future scenario that sees the district heating network extended (2022). The study illustrated environmental improvements in terms of air quality deriving from the introduction and development of cogeneration and district heating technologies.

## COMMUNICATION AND RELATIONS WITH CUSTOMERS

Iren Group devotes much of its attention to its customers and communications concerning its offered products and services, promoting exact and transparent information via many contact channels. To this end, the Group carried out extensive customer care and customer satisfaction activities in 2017, aiming to increase the value of the relationship with the customer and create a direct link with the company, with the goal of planning targeted action on specific customer segments, with the sales and communication proposals tailored to needs.

In its relationships with its customers, Iren Group has transformed its role from mere supplier to expert in innovative energy products and relates services, adopting a new model that is increasingly orientated towards dialogue and advice on consumer habits. For this reason, it is pursuing the integration of physical and digital systems to guarantee a seamless customer experience that is continuous and coherent, both within and outside of company spaces, as well as via web and mobile instruments.

**Single toll-free number for commercial services:** in order to make the customer experience simple and coherent, a single toll-free number was created for Iren customer service, on which electricity and gas sales services for the free market, district heating (Emilia and Turin), integrated water service and TARI (Italian waste management tax) are merged. In compliance with current legislation, customers on the protected market have a dedicated toll-free number.



Over the year, the commercial call centres managed around 1,700,000 calls concerning gas, electricity and integrated water service procedures, with an average waiting time of around 115 seconds. Over 90% of customers who contacted the call centre spoke with an operator. Customer opinion is fundamental for improving the telephone contact service, which is why a survey system has been created. Immediately after a telephone call experience, the survey measures customer satisfaction in regard to waiting times, the politeness of the operator, the clarity of their responses and the effectiveness of the call. Continuous



monitoring of customer satisfaction also allows us to identify specific personnel training needs and means we are able to intervene promptly with the adaptation of support systems and procedures. The satisfaction levels achieved, combined with the service levels, regulate the contractual relationship with third-party suppliers who provide front-line services. Data analysis for 2017 demonstrated positive results overall, with constant improvement over the year in all indexes measured, which are still substantially higher than national reference standards.

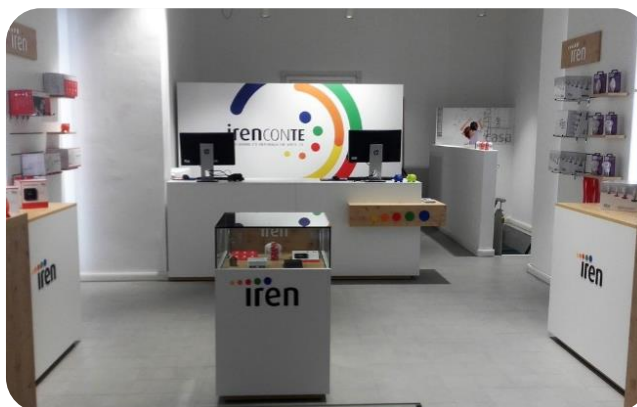
**Environmental services contact centre.** The Group offers a contact centre service to provide information to customers on waste management and collection services. In 2017 over 380,000 telephone calls were received concerning waste management, slightly down on 2016, due to the increased operation of the contact centres. The number of customers that have actually spoken with an operator rose compared to 2016 due to the incorporation of the Turin area. Over 93% of customers who contacted the service spoke with an operator, with average waiting times of around 54 seconds.

**Integrated customer relationship management (CRM) system.** The new CRM, in production since 2017, incorporates many contact channels, thus allowing the collection, registration and management of all information related to customer interactions within a single system. The system also includes the sending of proactive multichannel communications (email, text, mail) to customers in order to continuously update them on the progress of procedures/requests until they have been resolved, and notifications regarding supplies. In order to facilitate customer autonomy in managing their own contracts, the CRM is integrated within the ClickIren portal, which displays functions for getting information, resolving problems, sending meter readings and signing up to offers on the Internet and apps.

**Help desk: Iren space for customers.** In 2017, the help desk channel was enhanced through an optimisation plan that aimed to guarantee commercial repositioning and efficiency, transforming a pure welcome and management channel into an instrument for strengthening the brand that is able to seize sales opportunities, including new products, also with a view to improving service levels. Thus, the help desk has evolved to become a space for advice that favours dialogue and closeness between the customer and the company, capitalising on the human relationship as a vehicle for trust, support and specialised experience.

Value added services include help desks that offer the option of booking an appointment with an Iren agent without the need to wait in a queue and guidance points for older customers and those with language difficulties. Opening hours were also extended to afternoons and Saturdays for the help desks of Parma, Piacenza, Genoa, Reggio Emilia and Savona.

*Widespread distribution across the area:  
a network of 77 physical locations to manage  
requests and provide professional advice to  
customers*



In 2017, Iren served around 430,000 customers in 77 physical locations spread over the north-west area and assisted customers in reading and correctly understanding bills and the impacts generated by legislation, as with all other requests.

A web help desk can also be accessed with reserved areas for different types of customers to access data and carry out contractual transactions.

Help desk activity	2017	2016	2015
Help desks (no.)	77	55	33
Customers served (no.)	429,744	273,619	236,449
Mean waiting time (min.)	17.5	23.0	16.7

**Websites.** In 2017, the new system of Group websites was completed, which saw the sites being relaunched with completely overhauled content and design: [gruppoiren.it](http://gruppoiren.it), [ireninforma.it](http://ireninforma.it), [irenacqua.it](http://irenacqua.it), [eduiren.it](http://eduiren.it), [irenambiente.it](http://irenambiente.it), [irenlucegas.it](http://irenlucegas.it) and [ireti.it](http://ireti.it). Specifically, in regards to the new [irenlucegas.it](http://irenlucegas.it) site, focus was directed on guaranteeing greater content usability, thanks to intuitive navigation and the enhancement of the e-commerce section and customer interaction tools. Indeed, the new site offers an updated customer experience, also in terms of mobile navigation. The customer can start a live chat on every page to get assistance when searching for information or when purchasing services and products.

**Social networks.** Iren consolidated its presence on the main social networks, such as Facebook, Twitter, Youtube, Instagram and LinkedIn and saw a continuous increase in the number of contacts and followers.

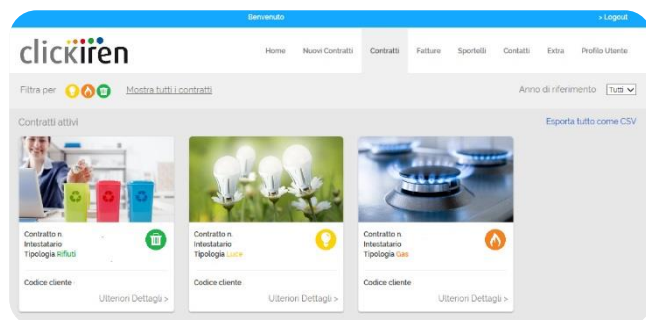
**Mobile apps.** Iren Group provides two mobile apps for its customers.

*ClickIren* offers many services and the possibility to view in one place all of the contractual relations in force with Group companies: electricity, gas, water, urban environmental services and district heating. The app can create multiple associations between a single account and various contractual positions and can delegate one or more contractual positions to another account. ClickIren can also be used to activate the digital bill service and cancel the paper copy at the same time. At the end of 2017, around 300,000 customers chose to use ClickIren (+84% compared to 2016), also with the aim of monitoring their own consumption profile, with a total of 100,000 views per week of the



bill list being recorded, as well as the same amount of bill downloads.

*Ecolren*: provides the public and customers with useful information relevant to environmental services and on the local Acquapubblica distributors. The app also provides a photo signalling system: photos of abandoned waste, damaged bins and other anomalous situations can be taken and sent, along with text and geographical coordinates.



**IrenCollabora.it platform.** This is a tool that was created within the context of the Iren Local Committees (in this regard see page 42), to establish an innovative channel of dialogue, discussion and participatory planning between Iren Group and the local community stakeholders. The platform gathers ideas, proposals, comments and observations to improve the services offered by Iren and environmental and social sustainability.

## COMMERCIAL ACTIVITIES

Iren Group presents its customers with a complete offer portfolio which, starting with historic activity, incorporates new solutions and technologies to meet all energy management needs and the well-being of citizens, companies and local authorities.

Iren's service is characterised by an efficient sales network consisting of a widespread network of help desks and call centres, as well as by specialists dedicated to large companies, which are also able to support energy supply with all the consultancy and assistance activities regarding tariffs and contracts.

Iren Group also offers its customers certified clean electricity, ensured by the procurement of renewable sources through its Companies.

### RETAIL CUSTOMERS

Commercial activities within the retail segment are focused on building customer loyalty and the development of prospective areas.

In 2017, the activity conducted within the reference areas of newly acquired subsidiaries was particularly significant, with a gradual homogenisation of the offer portfolio and customer services. In addition to launching new offers for the free market, in compliance with the directives of the Italian Regulatory Authority for Energy, Networks and Environment (ARERA), "similar protection" and "PLACET" offers were created, with the latter currently being defined.

Sales activities were consolidated via active teleselling channels and physical companies and the **web sales** channel was brought

up to full operational speed – thanks to the launch of the new irenlucegas.it site and new commercial partnerships with sector operators – which allows contracts to be signed online, both independently and with assistance.

In order to promote its offers, products and services online, Iren Mercato carries out publicity campaigns on search engines and has strengthened its partnerships with the main energy price comparison sites, promoting its own offers on almost all comparison sites active on the Internet.

### New Downstream

In 2017 the sale of "New Downstream" extra-commodity products and services was consolidated, allowing Iren Mercato to position itself as the all-round reference supplier within the energy sector thanks to a wide range of products for energy efficiency and home management and protection. To increasingly meet the needs of the home environment as a whole, ten offers were launched and important partnerships with leading companies in the renewable energy and home assistance sectors were undertaken. The new services and products have achieved a sales penetration of around 2% of the active customer base. This result was possible thanks to the extensive involvement of all sales and customer contact channels, which have begun a process of transformation and of new skill acquisition that the new range of offers has accelerated and made obligatory. Furthermore, the first Iren Mercato branded store was opened in the city of Parma, called "Spazio Iren".

The transition towards an increasingly sustainable business model was finalised by the **Iren Energia Solare** project, created within the partnership with Enerpoint Smart Solution, which proposes two offers to customers, an "easy" package and a "top" package for the design, construction and installation of turn-key solar panels suitable for individual needs. The energy produced by the solar panels is not only completely clean and sustainable, but, thanks to the storage system, can also be stored and used only when needed. Iren Mercato thus chose to help its customers to reduce their energy bills and CO<sub>2</sub> emissions in order to lead them towards an increasingly sustainable future.

With the sale of **home automation** products, Iren Group aims to meet the diverse needs of its customers, who are more attentive to waste, consumption and interested in innovative offers that can help resolve everyday problems. The sale of home automation products was supported by the launch of a campaign on the main reference areas. The new "smart" thermostat allows the temperature to be remotely controlled and regulated and can be programmed based on the times and needs of the customers, who can monitor it remotely.

Furthermore, customers can make use of the home installation service by a specialised technician. The safety kit protects and secures the home and the family and allows them to remain in contact with their home at all times in order to control what is happening inside.

Both products are manufactured by Honeywell, an American multinational with over 3,000 employees in Italy and 14001 and 18001 certifications.





A market test was carried out prior to sale for every new product launch, which allowed the distinctive features of the offer to be defined, the quality of the product and any non-core services to be verified and the manufacturer/customer chain to be checked. Suppliers of the New Downstream products were selected by Iren Group, with particular attention paid to the possession of environmental and product safety certifications. A single assistance channel and a single network of technicians for installations, the supply of services and contractual support was chosen for the post-sales activity.

### BUSINESS CUSTOMERS

In 2017, Iren Mercato continued developing its customer base in the large customers segment, where it is able to meet the needs of energy intensive customers, through a consulting approach and tailored offers, and in the small and medium enterprises and building segment, with the development of a dedicated offer portfolio and the reinforcement of physical channels, aiming to develop customer loyalty and enhance the brand.

Leveraging its renewable production, from hydroelectric sources in particular, the Group continued the promotion of the green offers for the supply of electricity fully produced from clean sources, allowing business customers to promote their environmental commitment by using the Iren Verde brand and the relative origin guarantee certification.

In **energy efficiency services**, the Group offers buildings and businesses a detailed energy analysis service that highlights the energy saving areas that can be achieved with targeted efficiency interventions. In 2017, 16 energy check-ups were carried out.

Iren Mercato also consolidated its position as electricity supplier of the local authorities in traditional areas and surrounding zones, once again being awarded the tender called by CONSIP and giving the local authorities the option of purchasing 100% certified green energy from renewable sources. 16,200 local authorities chose to acquire green energy (mainly municipalities and university institutions) for a total consumption of around 450 GWh.

The active participation of the demand to dispatching - i.e. the series of end customer's behaviours and interventions aimed at changing their consumption habits in order to optimise the load curve, in accordance with the needs of the electricity network (**demand side management**) - lies within a wider scenario of review of the network balancing methods, that the European Union member states are pushing forward in line with the European Balancing Code.

In 2017, the Group conducted an analysis project of internal user loads and of the best technological solution to manage the role of Balancing Service Provider. The aim is to participate in future tenders, better defining the features of this new service that will incorporate the offer of Iren Mercato for the supply to the industrial segment.

### MARKETING AND CARING CAMPAIGNS

2017 marked Iren's return to communication with messages focusing on new brand positioning and product launches. Two campaigns were conducted simultaneously across the five reference provinces via outdoor billboards, radio spots and inserts

in the main local papers, with a focus on new home assistance products (Casa Senza Pensieri) and services dedicated to energy saving and safety (Domotica and Casa Sicura).

To launch the new business model and clarify this new commercial inclination, the Iren Mercato logo was proposed to consumers with the tag line *Luce Gas e Servizi* (Electricity, Gas and Services).



The development of the **New Downstream** project was bolstered by extensive promotional activity conducted at local service counters, with the creation of specifically dedicated physical exposition spaces and special sales initiatives.

Various campaigns were also conducted in 2017, which sought to increase customer loyalty by offering dedicated benefits and, in particular, a healthcare agreement that benefits customers and their family members, with the option of getting medical and healthcare services at subsidised prices at partner clinics across Italy (**Iren Ti Pensa**). The campaign, which begun in May 2017, will run throughout 2018.

The **Bolletta Facile** campaign was intensified in order to promote choosing the digital bill and the concurrent waiving of the paper bill, within the context of raising customer awareness relevant to the protection of the environment and new forms of savings.

For the launch of the new loyalty programme, a new campaign was created in September 2017 to promote **IrenConTe** to free market customers who are not currently subscribed and to customers who are already subscribed to the previous programme, yet are not active, so that they can immediately use the advantages offered by the programme.

The outcomes of each campaign underwent specific analysis to assess any improvement actions.

Continuing from 2016, a new market quality survey was conducted in 2017 to evaluate the extension of the offer with extra-commodity products/services in the home automation sector and ways to launch new, more strategically-effective products. The survey was carried out through focus groups conducted on a sample of customers and non-customers.

## CUSTOMER SATISFACTION

In order to have effective two-way communication with its customers, Iren Group has structured a regular monitoring system to assess the quality of the services supplied in order to identify the communication actions and operational interventions for continuous improvement. Customer satisfaction surveys are assigned to the Corporate Social Responsibility department and Local Committees, which deal with various business units for the definition of the survey areas and sharing the results achieved.

The customer satisfaction survey carried out annually provides the following for the various sectors:

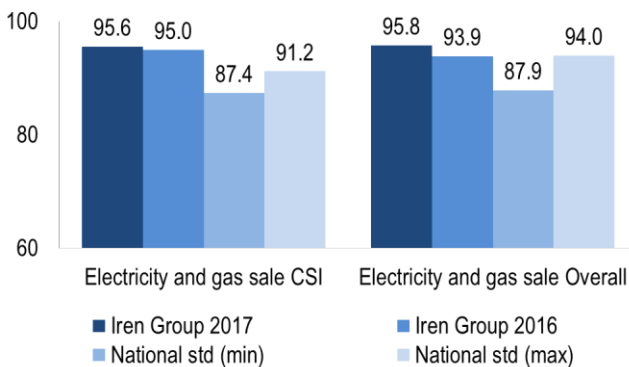
- an overall indicator (CSI index) that shows customer satisfaction in terms of the differences between perceived service value and expectations in regards to various technical and relational aspects, which are weighted between them;
- a synthetic overall satisfaction indicator that is monitored by asking the customer directly to highlight the overall perceived satisfaction level. Elements concerning the image and reputation of the company are crucial in this question;
- the trend of Iren Group over time, drawn from the comparison of the indicators investigated in previous surveys;
- the comparison with national industry standards in the "Italian Barometer of Customer Satisfaction Index" (BICSI), the result of surveys conducted by the Cerved Group.

The 2017 survey showed extremely positive results overall, considering the investigated services as a whole, which remained substantially above the corresponding national benchmark standards.

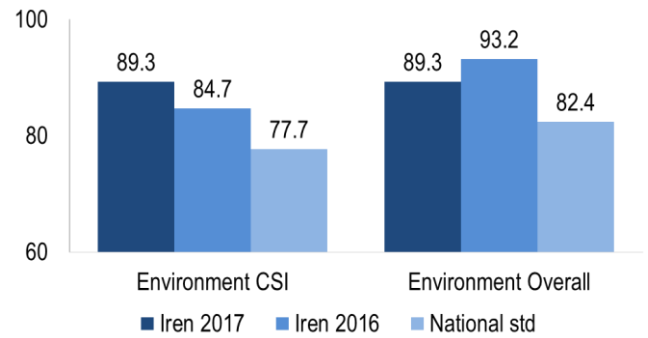
For **electricity and gas sale services**, the overall index of satisfaction for customers (CSI index) is 95.6% (in the previous survey it was 95%), while the overall positive opinion came to 95.8% (in 2016 it was 93.9%).

For **integrated water, environmental, gas distribution, electricity distribution and district heating services**, Iren Group customers expressed a CSI index for the various services between 89.3% and 96.6%, while opinion towards the Group overall ranged between 93.2% and 97.9%.

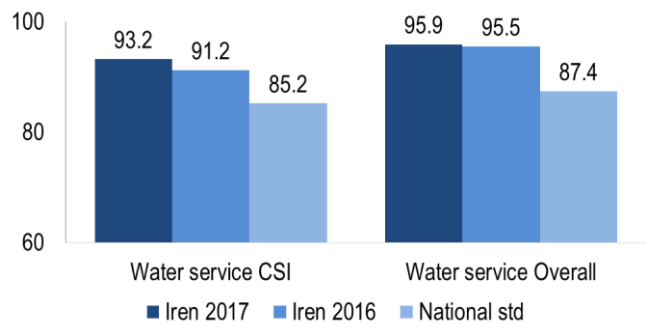
### SATISFACTION OF GAS AND ELECTRICITY SALES CUSTOMERS



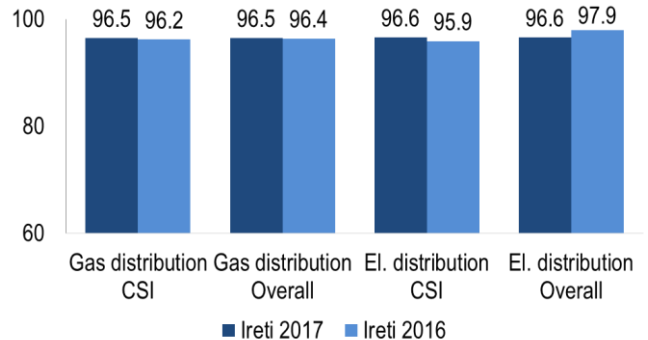
### SATISFACTION OF ENVIRONMENTAL SERVICES CUSTOMERS



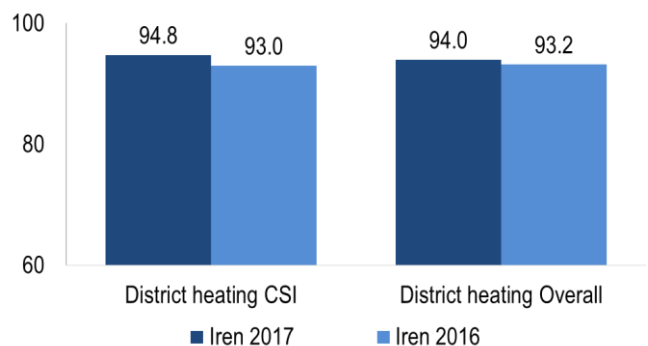
### SATISFACTION OF INTEGRATED WATER CUSTOMERS



### SATISFACTION OF GAS AND ELECTRICITY DISTRIBUTION CUSTOMERS



### SATISFACTION OF DISTRICT HEATING CUSTOMERS



*Group customers express high levels of satisfaction for both regulated services and free market services*



## COMPLAINTS AND BREACHES

The monitoring of **complaints** is not only an obligation in respect of the Regulatory Bodies, but is also a fundamental management instrument for identifying critical issues and defining and implementing corrective actions. The number and type of complaints is, therefore, an element of heavy focus for the Group and, at the same time, attests to the heightened awareness of customers and the growing height of their expectations. In 2017, Iren Group received a total of 19,651 complaints for the services managed, of which 11,080 for gas, electricity and district heating, 2,132 for the water service and 6,439 for environmental services. No complaint concerned breaches of privacy or loss of customer data.

Iren Group did not record any **breaches** in 2017 in the scope of discriminatory practices against customers. Likewise, no incidents of non-conformity were recorded, with relative sanctions, in regards to information, the supply of products and services, their relative safety and marketing activities (publicity, promotion and sponsorships). The proceedings instigated by the Antitrust Authority in 2016 for alleged unfair sales practices regarding the acquisition of some electricity and gas customers concluded with an administrative fine for Iren Mercato in January 2017. In March 2017, the company submitted an appeal to the Lazio Regional Administrative Court for an annulment of the fine. The decision is pending.

## CUSTOMERS IN NUMBERS

	2017	2016
Retail electricity customers	820,450	791,000
Retail gas customers	896,950	806,000
Residents served by the district heating service	871,000	846,000
Integrated water service inhabitants <sup>(1)</sup>	2,640,754	2,508,066
Integrated water service municipalities	242	206
Urban environmental services inhabitants	2,096,232	2,121,000
Urban environmental services municipalities <sup>(2)</sup>	145	147

<sup>(1)</sup> The figure for 2016 was recalculated due to a review of the calculation method

<sup>(2)</sup> The figure for 2017 decreased due to the aggregations implemented among the municipalities

## ELECTRICITY

### ELECTRICITY TARIFF

With the complete liberalisation of the electricity market, and implementing Directive EU 54, customers have been classified into 3 categories:

- **free market** customers are all customers that have chosen an offer from any electricity supplier;
- **protected customers** are domestic customers and low-voltage small business customers that have not chosen any free market supplier;
- **safeguarded** customers are customers that have not chosen a free market electricity supplier and are not included in the above category of protected customers.

Electricity tariffs consist of costs relevant to the portion of energy (supply and commercialisation), network and measurement costs, general system charges and taxes.

On the free market, the difference between tariffs offered by competing suppliers is determined by procurement and sales costs, since the other cost items have to comply with the fixed national tariffs defined by ARERA (formerly AEEGSI) and the government.

The average composition of the 2017 bill was made up 47% of energy, 21% by measurement and network costs, 19% by system charges (parafiscal component) and 13% by taxes (excise duties and VAT). In the category of protected customers, electricity tariffs are controlled and set by ARERA and are the same for the whole of Italy. The overall cost for the last quarter of 2017 for this customer type (3 kW meter installed and annual consumption of 2700 kWh) was 0.196 €/kWh.

### ELECTRICITY SOCIAL BONUS

The electricity bonus is an instrument introduced by the Government and made operational by ARERA (formerly AEEGSI), in collaboration with municipalities, in order to guarantee savings on electricity costs to financially burdened and/or large families. The bonus is also granted to customers with a physical disability, i.e. for cases in which a serious disease entails the use of electrical medical equipment to keep them alive. In order to access the bonus, families that fall within the income and/or social-health parameters must submit a request to their municipality. The bonus is equivalent, on average, to about 25% to 30% of the total amount of the annual bill. The amounts for 2017 were:

- € 112 for a family of 1 or 2 members;
- € 137 for a family of 3 or 4 members;
- € 165 for a family of more than 4 members.

## ELECTRICITY SERVICE LEVELS

### QUALITY STANDARDS FOR THE SALE OF ELECTRICITY

The commercial quality standards set out by ARERA (Resolution 164/08 Amalgamated Law on the Quality of Sales Services - TIQV) refer to how promptly the seller provides some services requested by customers (replies to written complaints and requests for information, corrections of bills, etc.). The seller must comply with specific standards (beyond which, customers are entitled to automatic compensation) and general standards (for which the standard must be respected in the form of a given percentage and for which there is no automatic compensation). Data relevant to the individual companies are published in order to allow customers to compare the service levels offered.

In order to facilitate constant monitoring of the commercial quality of the electricity service, Iren Group regards customer satisfaction monitoring as strategic (in this regard, see page 83).

In 2017, the Group launched a monitoring plant concerning the quality of responses to written complaints about the sale of electricity and gas. Given the monitoring results, the many complaints received and the response time, also in relation to the standards defined by ARERA, the Group highlighted the areas that may be subject to improvement projects, as indicated in the table below. Specific improvement actions will be implemented in these areas in 2018.

Electricity sector – Response to written complaints	2017
Domestic LV customers	↑
MV Customers	✓

### QUALITY STANDARDS FOR THE DISTRIBUTION OF ELECTRICITY

With resolution 646/2015/R/EEL, which came into force on 1 January 2016, ARERA (formerly AEEGSI) approved the “Amalgamated law on the output-based regulation of the electricity distribution and measurement services” for the 2016-2023 period, which governs the continuity of service and voltage quality, specific and general levels of commercial quality and the selective promotion of investments in distribution networks.

Below we break down some of the indicators measuring service quality and having an impact on end customers.

The **Mean number of outages per LV customer** (low voltage) (N1) is the indicator relevant to unexpected long or short-term outages (less than 3 minutes but more than 1 second) attributable to the distributor.

For Iren Group, the targets set by ARERA are as follows: 1 interruption per year for high-density (municipalities with more than 50,000 inhabitants), 2.50 interruptions per year for medium-density (2.25 for a municipality with over 5,000 inhabitants and 0.25 for joining the adjustment due to interruptions caused by external forces) and 4 interruptions per year for low-density. This target is to be reached by 2019. If the distribution company

achieved a N1 improvement level at the end of the year compared to the previous year, it receives a bonus from ARERA, or otherwise it may receive a sanction with the relative fine.

Mean number of outages per LV customer - N1 <sup>(1)</sup>	2017	2016	2015
Turin high-density	1.43	1.28	1.36
Parma high-density	1.57	1.50	0.67
Parma low-density	3.36	3.05	3.30
Vercelli medium-density	1.50	0.37	n.a.

<sup>(1)</sup> Estimated 2017 figures. They are subject to verification and dependent on submission to ARERA on 31/03/2018 for the 2017 financial year. The figures for 2016 were recalculated on the basis of the final data for 2016 submitted to the Authority on 31/03/2017.

High-density: municipalities with a population of above 50,000 inhabitants.

Medium-density: municipalities with a population of above 5,000 inhabitants.

Low-density: municipalities with a population of less than 5,000 inhabitants.



The **Cumulative downtime** (D1) is the indicator that measures the mean number of minutes of downtime per low voltage customer relevant to long-lasting outages without notice, attributable to the distributor. For Iren Group, the targets set by ARERA are as follows: 25 minutes per year for high-density (municipalities with over 50,000 inhabitants), 45 minutes per year for medium-density (40 minutes for a municipality with more than 5,000 inhabitants and 5 minutes for joining the adjustment due to interruptions caused by external forces) and 60 minutes per year for low-density (municipalities with fewer than 5,000 inhabitants). If the distribution company achieved a D1 improvement level at the end of the year compared to the previous year, it receives a bonus from ARERA, or otherwise it may receive a sanction with the relative fine.

Cumulative downtime - D1 (minutes/user)	2017	2016	2015
Turin high-density	27.20	25.84	19.81
Parma high-density	28.10	27.55	14.00
Parma low-density	48.30	47.00	53.13
Vercelli medium-density	7.00	3.25	n.a.

<sup>(1)</sup> Estimated 2017 figures. They are subject to verification and dependent on submission to ARERA on 31/03/2018 for the 2017 financial year. The figures for 2016 were recalculated on the basis of the final data for 2016 submitted to the Authority on 31/03/2017.

**Mean time of arrival at the place of the call of the electricity emergency team** is intended to mean the time lapse between the call made by the customer, or the alarm activation for remotely





controlled plants, and the arrival of staff at the site where action is required.

Mean time of arrival at the place of the call of the electricity emergency team (minutes) <sup>(1)</sup>	2017
Turin <sup>(2)</sup>	75
Parma <sup>(2)</sup>	74
Vercelli <sup>(3)</sup>	40

<sup>(1)</sup> Estimated figures. They are subject to verification and dependent on submission to ARERA on 31/03/2018 for the 2017 financial year.

<sup>(2)</sup> The data is calculated considering the gap between the time when the call was received and the start time of the intervention.

<sup>(3)</sup> The figure is calculated considering the time registered between the time of the call made by the user and the time the technicians arrive on site, with the addition of 30 minutes, considering the size of the municipal area.

Iren Group, in the context of credit control, monitors the network disconnections of customers due to non-payment of bills, but does not consider it appropriate to report it, considering it as being sensitive data. The modernisation of the national park of electricity production plants and the strong increase in distributed generation, together with the networks renovation plan, produced a more efficient system, with a subsequent decreasing trend in network

losses. ARERA conventionally sets standard leaks, defining a percentage amount of the energy withdrawn in function of voltage, with the aim of encouraging the reduction of network leaks, comparing standard leaks with actual leaks.

Electricity network leaks <sup>(1)</sup>	2017	2016	2015
Iren Group	3.91%	4.65%	5.87%
National average	6.70%	6.70%	7.24%

<sup>(1)</sup> The national average is the latest available from the GSE (Electricity Services Provider) Electricity Report.

#### ELECTRICITY DISTRIBUTION NETWORK

Iren Group manages the electricity distribution network plants in the Municipality of Parma, the City of Turin – as well as some sections of network in some municipalities in the metropolitan area, Valle Orco and Valle Dora – and the City of Vercelli.

The size of plants owned by the Group at 31 December 2017 is summed up in the table below:

Distribution network plants	unit of measure	2017			2016			2015		
		Parma	Turin	Vercelli	Parma	Turin	Vercelli	Parma	Turin	Vercelli
HV/MV stations	no.	5	9	1	5	9	1	5	9	n.a.
HV lines	km	-	22	11	-	22	8.7 <sup>(1)</sup>	-	22	n.a.
HV/MV transformers	no.	13	21	2	13	21	2	12	22	n.a.
HV/MV transformation power	MVA	605	1,353	50	605	1,353	50	565	1,224	n.a.
MV Cables	km	609	2,001	135	593	1,984	161	644	2,170	n.a.
MV Overhead power lines	km	271	17	54	274	18	52	220	33	n.a.
MV/MV primary substations	no.	-	21	2	-	21	2	-	21	n.a.
MV/LV secondary substations	no.	1,131	3,386	201	1,129	2,945	199	1,126	3,206	n.a.
MV delivery substations	no.	147	297	47	142	303	46	140	348	n.a.
Tramway power supply conversion substations	no.	-	18	-	-	18	-	-	18	n.a.
MV/LV secondary substation transformers	no.	1,379	3,172	298	1,378	3,260	295	1,327	3,436	n.a.
MV/LV installed transformation power	MVA	360	1,060	61	359	1,071	60	355	1,109	n.a.
LV Cables	km	1,001	2,231	251	990	2,242	250	1,528	2,493	n.a.
LV Overhead power lines	km	601	372	78	604	360	78	53	392	n.a.
Low voltage concentrators (LVC)	no.	1,362	3,232	223	1,362	3,266	221	1,343	3,565	n.a.
Electronic meters	no.	135,765	583,888	31,276	134,174	607,319	31,252	132,953	607,319	n.a.

<sup>(1)</sup> Data recalculated due to a material error

The activities carried out at plants can be customer-requested activities and internally-established activities that are achieved using internal personnel and external companies. The activities requested by customers must meet the quality standards established by ARERA; customers shall pay some amounts, according to the type of operation, that are regulated or fixed by an estimate that must be accepted by the customer for the subsequent signing of the contract for the supply of electricity. Internal initiative works mainly consist of investments for upgrading plants, to improve the service levels, to comply with safety and environmental standards, or for technical innovation, as well as of plant operation and maintenance activities,

inspection of substations, emergency operations and fault repairs. Maintenance strategies include:

- for electricity substations, an inspection every three years for Parma, every two years for Turin and every year for Vercelli. In 2017, 2,698 out of the total of 5,250 substations were inspected, amounting to 51.4%.
- for medium-voltage overhead lines, a visual inspection every three years for Parma, every four months for Turin and once a year for Vercelli. Iren Group's overhead grid is 1,413 km and in 2017 around 19% was inspected.

The inspection plan, which was fully conducted in 2017, consists of controls of the compressed-air systems in the Turin area every quarter, the general inspection of every plant every four months, the thermographic control of active plant areas every six months, the control of electrical equipment containing oil with PCB>50 ppm every year and, also on a yearly basis, the control of the state of asbestos products.

## GAS

### GAS TARIFF

Gas tariffs comply with ARERA regulations (established by the Amalgamated Gas Sale Law - TIVG and the Consolidated Law - TUDG/RTDG), State laws concerning excise taxes and VAT and Regional laws concerning the additional regional tax (ARISGAM) applied to natural gas. The final gas price is made up of an energy related component and the commercial activities in the hands of the sales company, and a component relevant to costs for gas transport in domestic networks and local distribution networks that cover the costs of the national transporter and the company that manages the local network. Domestic taxes, additional regional taxes, as well as VAT are added to these two components.



### GAS SOCIAL BONUS

Some time ago ARERA (formerly AEEGSI) resolved a mechanism through which financially burdened and/or large families are entitled access to a subsidy that mitigates the economic burden represented by the use of gas. The mechanism, which involves distribution and sales companies, is generated from a request submitted by the customer to the municipality of residence, certifying their condition of financial difficulty. Subsequent to a positive assessment by the municipality, the distributor is notified, which credits the seller with a determined amount that the seller will pay to the end customer. The amounts accredited are established by resolutions of the ARERA according to the type of gas use and the climatic area in which the user resides.

## GAS SERVICE LEVELS

### QUALITY STANDARDS FOR THE SALE OF GAS

As for electricity, the quality standards for the sale of gas are set out by ARERA (formerly AEEGSI) Resolution 164/08 (Amalgamated Law on the Quality of Sales Services - TIQV) and subsequent amendments. In 2017, the Group launched a monitoring plant concerning the quality of responses to written complaints about the sale of electricity and gas. Given the monitoring results, the many complaints received and the response times, also in relation to the standards defined by ARERA, the Group highlighted the areas that may be subject to improvement projects, as indicated in the table below. Specific improvement actions will be implemented in these areas in 2018.

Gas sector – Response to written complaints	2017
Free market gas customers (low pressure)	⬆️
Protected gas customers (low pressure)	✅

### QUALITY STANDARDS FOR THE DISTRIBUTION OF GAS

The natural gas distribution service consists in transporting the gas through the local gas pipeline networks for delivery to the end users and is carried out in two phases: withdrawal of gas from the Snam Rete Gas pipelines, by means of first-stage withdrawal points and transport and supply to the users. A gas distribution system is typically composed of:

- one or more points of interconnection with the national or regional network of pipelines, through which the distribution network is powered; delivery, filtration, preheating (to prevent the freezing of the equipment due to the reduction of pressure), pressure regulation, measurement and gas odorants is carried out at these points (RE.MI. substations);
- the gas distribution network;
- the user connection plants for the delivery of gas to the end users, where the gas is measured using appropriate metering groups.



Gas distribution is carried out by Iren Group in compliance with the rules of functional separation for companies vertically integrated into the sector, in compliance with the principles of cost-effectiveness, profitability and confidentiality of company data with the aim of promoting competition, efficiency and adequate service levels.

In Genoa, the gas distribution network consists of a single plant fuelled by 7 RE.MI. substations (points of interconnection with the national or regional network of transmission pipelines, through which the distribution network is powered), in the Emilian area, the gas network is divided into several plants, each one powered by



one or more RE.MI substations, while in Vercelli the distribution network consists of a single interconnected plant, powered by two RE-MI substations, that also includes some municipalities that lie outside of the province.

Overall in 2017, 808,521 meters were installed, of which 261,191 were electronic meters that increased by 88% over 2016, confirming the constant commitment to improving the service offered.

In the Emilia area, Iren Group also manages the distribution service and sale of LPG, through reduction plants and channelled networks. LPG distribution is carried out through 14 plants located in some mountain municipalities of the Province of Reggio Emilia that are not yet served by the natural gas network.

The suppliers deliver already odourised LPG in tanks, and Iren distributes it to customers at a pressure of 30 mbar. Safety is ensured by means of remote control of the plants.

In relation to the commercial quality parameters, the gas distribution service refers to the standards laid down by ARERA (formerly AEEGSI), for which automatic compensation to the customer is envisaged in the case of non-compliance with these standards.

Commercial quality standards – Gas distribution	Max time laid down by ARERA	2017
Cost estimate for simple jobs	15 working days	✓
Cost estimate for complex jobs	30 working days	✓
Execution of simple jobs	10 working days	✓
Activating supply	10 working days	✓
Deactivating supply	5 working days	✓
Reactivation following on from deactivation due to non-payment	2 working days	✓

#### SERVICE OUTAGES AND LEAKS ON THE GAS NETWORK

Gas service interruptions occur mainly during network renovation works when the user connections are switched from old to new pipelines.

To limit the number of interruptions, the Group intervenes, whenever possible and to an ever-greater extent, using a device that allows switching without interrupting the gas supply.

Service interruptions on the gas network are divided into **outages with notice**, if works are planned and the customer can be informed promptly of the outage, and **outages without notice**, that is, those that cannot be communicated at least one day beforehand to all customers.

Gas outages (no.)	2017	2016	2015
Outage without notice	1,486	1,204	1,195
Outage with notice	1,531	1,772	1,712
<b>TOTAL</b>	<b>3,017</b>	<b>2,976</b>	<b>2,907</b>

In reference to gas leaks, the table below highlights that in 2017 significant gas leaks numerically come from the group of measurement.

Gas leaks (no.) <sup>(1)</sup>	2017	2016	2015
on network	523	491	601
on underground part of user connections	346	335	331
on overhead part of user connections	2,397	1,616	1,433
on measuring unit	5,187	4,327	3,717
<b>TOTAL</b>	<b>8,453</b>	<b>6,769</b>	<b>6,082</b>

<sup>(1)</sup> For 2015, the figures were recalculated following on from a recalculation that also includes leaks related to planned inspections

In compliance with the ARERA provisions, the main initiatives to reduce the number of gas network leaks envisage the gradual application of cathodic protection of the unprotected steel network and of the cast iron pipelines with hemp and lead joints.

Total gas network composition (km)	2017	2016	2015
Steel	6,258	6,237	6,085
Polyethylene	1,255	1,240	1,187
Cast iron	470	474	362
Other material	1	22	3
<b>TOTAL</b>	<b>7,984</b>	<b>7,973</b>	<b>7,637</b>

The project replacing the gas network with new steel, polyethylene and cast iron pipes continued in 2017 also.

Gas network replaced (km)	2017	2016	2015
Steel	19	13	17
Polyethylene	0	0	0.5
Cast iron	5	5	12
<b>TOTAL</b>	<b>24</b>	<b>18</b>	<b>30</b>

#### SAFETY OF THE GAS NETWORK

Network inspection, an effective emergency service and an adequate concentration of odorant are fundamentally important elements in the proper operation of a gas distribution system, together with a continuous modernisation of the network. ARERA (formerly AEEGSI) establishes that gas distribution companies are obliged to respect safety service obligations, which include the inspection of 100% of the low pressure gas network in four rolling years and 100% of the medium-high pressure network in three rolling years. This equates to the yearly inspection of at least 25% of the low pressure gas distribution network and at least 33% of the medium-high pressure network. In 2017, Iren Group inspected around 85% of the 7,984 km of the gas network managed, that is to say 6,778 km. Specifically, 82% of the low-pressure network and 88% of the medium-high pressure network were inspected: percentages that are much higher than those requested by the Authority. The scheduled inspection of gas networks also has the effect of a greater control of leaks.

In addition to network inspections, ARERA also sets minimum levels of odorants for service safety and the protection of people and things. In 2017, Iren Group fed 45 mg of odorants (tetrahydrothiophene) into the gas network for every cubic metre of gas distributed, a higher amount than that established by ARERA (32 mg/m<sup>3</sup>), which means that its presence in the air can be noticed easier and any gas leaks identified quickly.

*In 2017 85% of the gas networks were inspected: more than twice than what is requested by ARERA*

The mean time of arrival at the place of the emergency call stood between 26.5 minutes and 34.5 minutes, in relation to the various areas served. In 2017, the gas Emergency Team received 11,572 calls, 98% of which were responded to with the arrival at the place of the call within the 60 minutes imposed by the Authority.

## DISTRICT HEATING

In 2017, ARERA (formerly AEEGSI) refined its analysis of the contractual quality of the district heating service to prepare the final regulation, introducing minimum obligatory quality standards for all operators. These minimum standards will refer to services provided on the request of the customer, which are held to be a priority for their protection. Optional minimum quality standards will be given by the Authority for the remaining services, the adoption of which will be voluntary for operators. Within the current transitional phase, with significant changes to the regulatory framework, the identification of indicators defined independently by Iren Group continued as an operational control activity.



## DISTRICT HEATING TARIFFS

District heating tariffs are not currently governed by national regulations and are historically constituted by the principle of “avoided gas cost” that is the cost that the customer would have paid using natural gas (expressed in Euro/m<sup>3</sup>). The service tariffs are, therefore, related to the final cost of natural gas, which is updated depending on the regulations of ARERA, in regards to

the gas tariffs of the retail market, and the government in regards to taxes and VAT.

## NETWORK SUBJECT TO INSPECTION

The district heating network managed by Iren Group, in the municipalities of Turin, Nichelino, Genoa, Reggio Emilia, Piacenza and Parma extends to almost 923 km and, in 2017, 830 km were inspected, around 90% of the total. This control percentage rose considerably against the 52.8% of the previous year.

*In 2017, around 90% of the district heating network was inspected*

## INTEGRATED WATER SERVICE

### INTEGRATED WATER SERVICE TARIFF

The organisation of the Integrated Water Service in A.T.O.s (water and waste regulation areas) has led to new rules for setting tariffs, which must completely cover investment and operating costs. The tariffs are approved by ARERA and calculated, for 2016-2019, based on Resolution 664/2015/R/IDR.

In general, the water service tariff consists of one **fixed portion of service**, due irrespective of consumption, and a **variable portion**, based on the consumption of water and wastewater treatment services. To discourage waste, the tariff is divided into bands and increases as consumption rises. Types of use that vary from area to area (for example: domestic resident, domestic non-resident, zootechnics, commercial, industrial, craft, other, non-drinking, temporary, building sites, agricultural and oil mills). The table below provides the average tariffs, defined by the Regulatory Authority, concerning the areas where the Group manages the entire integrated water service (the distribution of drinking water, sewerage and treatment).

Mean tariff for IWS (Euro/m <sup>3</sup> ) <sup>(1)</sup>	2017
Province of Alessandria <sup>(2)</sup>	1.66
Province of Asti <sup>(3)</sup>	2.44
Province of Cuneo <sup>(4)</sup>	1.83 - 1.84
Province of Genoa	2.39
Province of La Spezia <sup>(5)</sup>	2.03
Province of Parma <sup>(4)</sup>	1.30 - 2.36
Province of Piacenza <sup>(4)</sup>	1.63 - 2.11
Province of Reggio Emilia	2.13
Province of Vercelli	1.67

<sup>(1)</sup> The average tariff is calculated by adding the basic domestic use tariff for the water service, the sewerage tariff and the wastewater treatment tariff.

<sup>(2)</sup> The figure refers to the tariff applied to the Municipalities of Ovada and Strevi.

<sup>(3)</sup> The figure refers to the tariff applied to the Municipalities of Canelli and Nizza Monferrato.

<sup>(4)</sup> In the area served, different reference tariffs are present that are given in minimum and maximum figures.

<sup>(5)</sup> The figure refers to the tariff applied to the Municipality of Bolano





In the areas served in the provinces of Savona, Imperia, Aosta, Novara, Brescia, Mantua, Pavia and Verona, the management of Iren Group is partial and mainly concerns the water service.

## SOCIAL FUNDS FOR WATER

In Emilia, ATERSIR (Territorial Agency of Emilia Romagna for Water and Waste Services) approved a social fund for families in situations of economic hardship.

For 2017, the amount for Parma was € 240,000, € 160,000 for the province of Piacenza and € 350,000 Euro for the province of Reggio Emilia. An annual social fund was established in Genoa, resolved by the Mayors' Assembly, distributed by the Municipalities to families suffering economic hardship. The amount of € 800,000 was confirmed also for 2017, for the financing of tariff reductions on social grounds.

## QUALITY OF THE INTEGRATED WATER SERVICE

Since 2017, ARERA Resolution (655/2015/R/IDR) has been fully implemented with the new obligations and requirements for the regulation of the contractual quality of the integrated water service, incorporating what was previously laid down by the diversified Service Charters for each area managed. The first complete report on the monitored data is envisaged by the same resolution for the end of March 2018.

In order to constantly monitor the quality of their services, Iren Group regards customer satisfaction monitoring to be of fundamental importance. The periodic collection of these surveys was included as an integral and essential part of the operators' quality system (see page 83).



## WATER QUALITY

Water quality control consists of analysing the main parameters laid down by Italian Legislative Decree 31/2001 at the various sampling points established by the Organisation responsible for

the control (LHU) along the distribution network and at the outlet of the large purification plants.

If the water withdrawn contains levels of harmful substances that exceed the limits specified by law, it will be subject to treatment prior to distribution. The treatments most frequently used for deep water are normally designed to remove iron, manganese and ammonia, elements naturally present in the groundwater captured.

*Around 57,000 analyses were conducted on drinking water and wastewater in 2017 for over 738,000 parameters analysed*

The quality of the water is guaranteed by a control on the entire water process: from water sources to the treatment, filtration and purification processes and the distribution network, up to actual delivery to customers. The samples taken are analysed at Iren Group Laboratories to determine their chemical and microbiological characteristics. In the treatment sector, analytical tests are carried out on the wastewater flowing into and out of the plants, and on the intermediate treatment steps, the sludge produced and the drains from the production user plants into the sewer.

The internal tests exceed the minimum number required by law and the protocols stipulated with ATO, ARPA and Provincial Authorities.

Analysis of drinking water and wastewater (no.)	2017	2016	2015
Emilia Romagna	37,006	34,406	36,435
Piedmont/Valle D'Aosta <sup>(1)</sup>	5,161	2,712	n.a.
Liguria	13,474	15,296	16,090
Lombardy <sup>(2)</sup>	953	n.a.	n.a.
Veneto <sup>(3)</sup>	164	n.a.	n.a.
<b>TOTAL</b>	<b>56,758</b>	<b>52,414</b>	<b>52,525</b>

<sup>(1)</sup> In 2017, in addition to Vercelli, the provinces of Alessandria, Asti, Cuneo, Novara and Aosta are included, where the Group took over management during the year.

<sup>(2)</sup> The figure is related to the provinces of Brescia, Pavia and Mantua and only to samples conducted on drinking water, as the Group does not manage the wastewater service.

<sup>(3)</sup> The figure regards the Province of Verona and samples conducted on drinking water only, as the Group does not manage the wastewater service.

Parameters analysed in drinking water and wastewater (no.)	2017	2016	2015
Emilia Romagna	405,545	376,874	400,727
Piedmont/Valle D'Aosta <sup>(1)</sup>	71,153	24,421	n.a.
Liguria	236,652	256,935	162,204
Lombardy <sup>(2)</sup>	21,064	n.a.	n.a.
Veneto <sup>(3)</sup>	4,026	n.a.	n.a.
<b>TOTAL</b>	<b>738,440</b>	<b>658,230</b>	<b>562,931</b>

<sup>(1)</sup> In 2017, in addition to Vercelli, the provinces of Alessandria, Asti, Cuneo, Novara and Aosta are included, where the Group took over management during the year.

<sup>(2)</sup> The figure is related to the provinces of Brescia, Pavia and Mantua and only to drinking water parameters, as the Group does not manage the wastewater service.

<sup>(3)</sup> The figure regards the Province of Verona and drinking water parameters only, as the Group does not manage the wastewater service.

## WATER DISTRIBUTION

Following the necessary tests to establish compliance with the requirements of drinking water, the water withdrawn at various sources is fed into the distribution network that reaches all points of use.

Control, extension and maintenance activities are carried out on the networks with a view to minimising inconvenience for the public as far as possible. A priority, in fact, is the attention to the protection of the urban environment and the sustainability of everyday life, in particular with regard to the impact on city streets.

In 2017, 593 planned interruptions were carried out in the areas of Piacenza, Parma, Reggio Emilia, Vercelli, Genoa, Savona, Imperia, La Spezia, Alessandria, Asti, Cuneo, Brescia and Verona. Planned interruptions refer to water supply suspensions that are necessary to perform previously planned works. In these cases, notices are disseminated via the press or local television channels about the length of the interruptions, as they affect a significant part of the population. In other cases, notices are posted in the areas concerned to inform the public of the interruption date.

For emergency interventions, e.g. to repair a burst pipe, all of the necessary measures are taken in order to restore the water supply in the shortest possible time, in accordance with the provisions of the laws in force.

In 2017, a total of 6,508 network breaks occurred (the areas of Aosta, Alessandria, Novara, Mantua and part of the Vercelli area are not included, where the data collected is currently being processed). Repairs were carried out after reports were received and the leaks detected.

The mean time of arrival at the place of the emergency call for Iren Group is 63.9 minutes in the areas of Piacenza, Parma, Reggio Emilia, Vercelli, Genoa, Savona and Imperia (the areas of Aosta, Alessandria, Novara, Mantua and part of the Vercelli area are not included, where the data collected is currently being processed).

In 2017, about 3,042 km were controlled on a water network of approximately 18,954 km, equal to 16.05%.

## ENVIRONMENTAL SERVICES

### TARIFF SYSTEM

The TARI tax consists of a **fixed part**, determined by costs of sweeping, general costs, part of the personnel costs and other essential components of the cost of service, referring in particular to depreciation and administration costs, and of a **variable part**, proportionate to the quantity of waste delivered, to the service supplied and the entity of management costs. The TARI is applied to utilities, taking account of the surface area occupied and partly, for domestic utilities, accounting for the number of family members. With the TARI, Iren Group invoices its service to the Municipality and the Municipality issues payment notices to the users. In calculating the TARI, the Municipal Authority takes account of the VAT that it has to pay, which is why, in the tax applied to users, the VAT is not expressed but included in the tax itself. Social tariffs are not provided for by the general legislation of the TARI. At a regulatory level, every Municipality may include favourable conditions or reduction clauses in favour of certain groups or users.



In 2017 the Group issued the TARI in the name of and on behalf of some Municipalities, applying the regulatory provisions in force to the utilities, including those relevant to any reductions or favourable conditions/social exemptions, if expressly approved by the individual Municipalities.

The table below provides the average TARI for 2017 for the main municipalities served.

Year 2017		Mean TARI by provincial capital			
Type of domestic users	Municipality of Parma	Municipality of Reggio Emilia	Municipality of Piacenza	Municipality of Turin	
	Euro/year	Euro/year	Euro/year	Euro/year	
1 member families	130.97	172.46	124.17	135.60	
2 member families	211.92	262.15	217.47	244.47	
3 member families	243.53	336.15	269.78	292.11	
4 member families	284.23	385.19	299.59	321.74	
5 member families	333.78	432.93	360.32	376.26	
≥ 6 member families	377.55	466.98	407.20	423.42	

For Vercelli, the TARI established by the municipality does not use a criterion for the number of family members, but rather a

tariff of € 2.18 per square metre of surface area occupied for businesses and residential areas.



## ENERGY MANAGEMENT AND EFFICIENCY

Iren Group carries out management and maintenance of heating, air conditioning and general technology plants and currently manages approximately 1,200 facilities in private apartment buildings, public buildings, sports centres, hospitals, shopping centres and the tertiary sector.

### Re-build Project

In 2017, the Re-build project managed by Iren Rinnovabili continued to promote the implementation of interventions to improve the energy efficiency of homes in the City of Reggio Emilia, aiming to reduce environmental impact and generate economic advantages for the community. After conducting around 100 energy audits on just as many properties, Iren Rinnovabili is continuing its activities to place the apartment buildings in a condition to make informed choices regarding the reduction of energy waste. Through specific agreements, the Re-build project offers a special guaranteed funding source for apartment buildings to carry out the interventions calculated by companies that are part of the Re-build network. This network allows all energy efficiency requests to be fully covered, making designers, builders and installers available in the local area.

The Group provides energy services to civil and industrial realities aimed at maximising efficiency and rationalizing consumption with maximum environmental comfort. For this purpose, the Group uses an advanced remote control system that provides continuous supervision and monitoring of all functional plant parameters. For plants managed for third parties, Iren Group carried out various technical interventions aimed at the containment of costs. This also included the redevelopment of thermal power stations with the installation of condensing boilers (savings of 10% to 30% depending on the age of the previous plant) and the installation of thermostatic valves and heat allocators in centralised systems (savings from 10% to 20% compared to the previous situation).

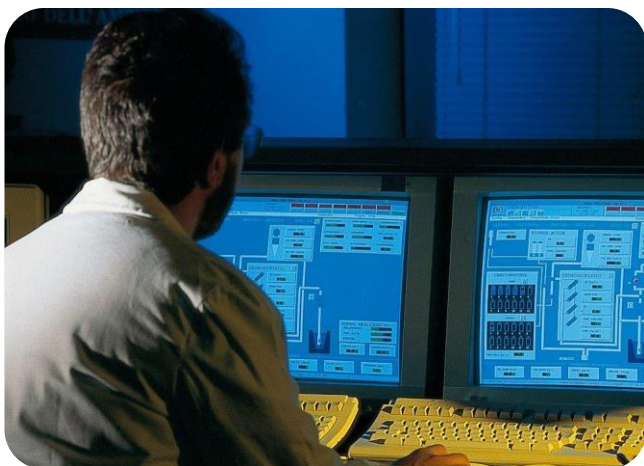
## TELECOMMUNICATIONS

The provision of connection services to business customers has always been accompanied by 24/7 technical assistance and monitoring that allows customers to be aware of the operational status and, in case of anomalies, for the assistance team to be alerted automatically. The network monitoring and remote control systems are provided from the web platform and every customer is assigned a sales account to provide support for any need. The commercial activity is performed directly by internal personnel, in accordance with the conduct standards provided by the Group's Code of Ethics.

Once again, in 2017, customer satisfaction was high: this can be seen in the number of renewed contracts compared to the low number of complaints. The customer satisfaction index was calculated at 88.10%, while the retention index for 2017 was 89.8%.

Optical fibre services include a 99.9% Service Level Agreement, which means that the connection must be available 99.9% of the 365 days of the contract. In the case of Iren Group, this is possible also due to redundant ring infrastructures: every customer is connected via two sections of optical fibre, which allows the second to become operational if the first is interrupted.

Thanks to significant fibre cabling in some large cities - following the guidelines of the Ministry of Economic Development's Broadband Project and the increase in the performance of transmission lines (VDSL technologies that offer navigation speeds of up to 100 Mbps, compared to the 20 Mbps of previous ADSL technologies) - competition between major market players has increased, with consequent reductions in the tariffs. This market dynamic drives the Iren Group to offer, at the same price, a faster connection speed, being able to make use of backbone infrastructures that have a bandwidth capacity in excess of the marketed capacity.



# Iren People



## IMPORTANT TOPICS



Employment



Industrial relations



Development of human resources



Corporate welfare and diversity



Occupational health and safety



Internal and external communication





# HUMAN RESOURCES: IREN'S RESOURCES

The growth and development of Iren personnel are fundamental values of Iren Group. The general objective is to manage individual skills and expertise, within a model that aims to maintain an elevated quality of human resources, through policies that aim to increase professionalism and guarantee the necessary involvement. For this reason, in 2017 the Group launched a detailed analysis of personnel skills in order to direct development and growth, in light of the challenges of the new Business Plan and the significant technological innovations that the Group is facing, while simultaneously pursuing change management interventions to support the re-engineering of processes and strengthen managerial culture at all levels.

Iren Group is also actively committed to improving working conditions and to the personal development of its employees, favouring a stimulating and productive work environment: investments in training and development, meticulous career planning, targeted strategies to enhance talents, tailored benefits, personalised remuneration policies and an innovative corporate culture are some of the elements on which the Group focused in 2017.

*Increasing professional skills and encouraging personnel involvement are essential requirements for the growth and development of the Group*

Also in 2017, Iren Group initiated the process to obtain the Top Employers Italia certification, an exclusive certification for the best companies in terms of human resources: those that offer excellent working conditions, that train and develop talents at all company levels and that constantly strive to improve and optimise their best practices in the field of human resources.

The Group is aware of the important role employment plays in ensuring the social development of the environment in which it operates. It contributes to maintaining employment levels not only through its own employees, but also by promoting the development of the companies to which it commissions services and work, by requesting guarantees from them in terms of both personnel and safety policies through the application of some of its own standards. Moreover, the Group offers employees of supplier companies the possibility to use some of the company's services and to attend training courses organised by the Group itself.

The Group contributes to the quality of employment of the local inhabitants and of its suppliers, also through actions aimed at increasing professional skills and consolidating improvement of the level of education. While having no specific local or regional recruitment policy, due to the specific features of the Italian labour market, nearly all employees reside in the province where their place of work is located. Furthermore, considering the types of business, the geographical areas in which the Group operates and

compliance with current legislation, no risk of child labour or forced labour exists for Iren Group.

## PERSONNEL SNAPSHOT

At 31 December 2017, Iren Group had 6,285 employees, an increase over the 6,226 employees at 31 December 2016. Personnel changes are due to:

- the demographic rebalancing plan, begun in 2014 with a retirement incentive plan (Article 4, Italian Law 92/2012), and new hires which aim to implement generational change, together with the continuation of the policy to reduce the workforce;
- the continuation of the reorganisation of Iren Group subsidiaries, in implementation of the Business Plan;
- changes to the scope (entry of the REI Group, a business unit of the company Acque Potabili and of Salerno Energia Vendite, into which the former subsidiary, GEA Commerciale, was merged).

Personnel as at 31/12 by position (no.)	2017	2016	2015
Senior managers	89	95	82
Junior managers	265	251	238
White collar workers	2,918	2,878	2,859
Blue collar workers	3,013	3,002	2,953
<b>TOTAL</b>	<b>6,285</b>	<b>6,226</b>	<b>6,132</b>

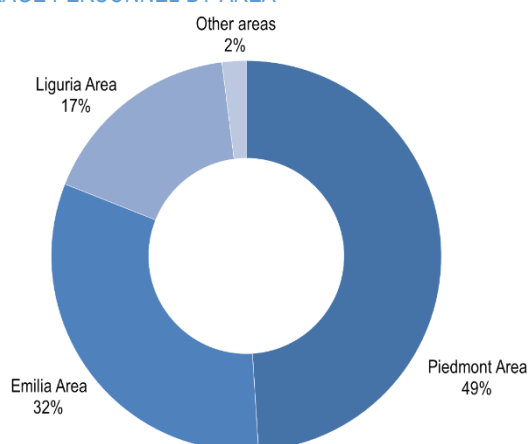
*98% of the Group's personnel is employed with a permanent contract*

**Approximately 98% of personnel are employed on permanent contracts, while the rest include apprenticeship and fixed-term contracts for new high school and university graduates.**

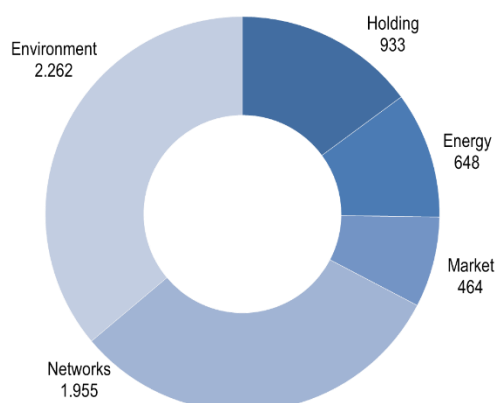
These figures confirm that the Group favours long-lasting working relationships with its employees. It also provides internship opportunities with the aim of offering a real professional experience to young resources in particular. In 2017, 110 people took part in internships.



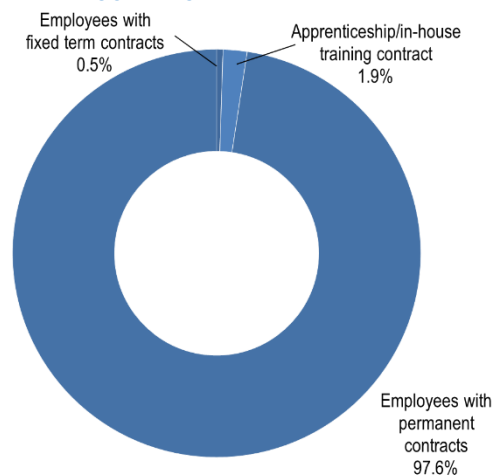
## AVERAGE PERSONNEL BY AREA



## MEAN PERSONNEL BY BUSINESS UNIT



## PERSONNEL BY CONTRACT TYPE



46% of employees, almost the majority, fall within the 30 to 50 age group, while the average age is 49.

## RECRUITS AND TERMINATIONS

In 2017 there were 152 hires, with a clear majority (approximately 75%) of people employed with permanent or apprenticeship contracts. The use of fixed-term contracts slightly increased due to seasonal needs in the environmental sector. Additionally, 87% of employees whose fixed-term or apprenticeship contracts expired during the year were recruited on a permanent contract.

Hires by contact type and age (no.)	2017	2016	2015
Permanent contract	47	54	162
Fixed term contracts	38	23	19
Professional apprenticeship	67	31	15
<b>TOTAL</b>	<b>152</b>	<b>108</b>	<b>196</b>
under 30 years old	79	53	87
from 30 to 50 years old	69	50	99
over 50 years	4	5	10
<b>TOTAL</b>	<b>152</b>	<b>108</b>	<b>196</b>

The most common reason for termination, in addition to resignations, was due to the voluntary termination of employees in possession of pension requirements.

Staff exits by reason (no.) <sup>(1)</sup> and turnover (%)	2017	2016	2015
Resignations	53	40	23
Voluntary termination/retirement	51	220	312
Death	13	4	6
Dismissals	19	7	10
Mobility towards other companies in the Group <sup>(2)</sup>	7	-	1
Inability to work	14	22	31
Expiry of fixed-term contract	7	13	7
<b>TOTAL EXITS</b>	<b>164</b>	<b>306</b>	<b>390</b>
<b>TURNOVER <sup>(3)</sup></b>	<b>2.6%</b>	<b>4.9%</b>	<b>6.4%</b>

<sup>(1)</sup> Excluding the sale of business units for 2015.

<sup>(2)</sup> Agreed mobility towards Companies which are not part of the analysed perimeter.

<sup>(3)</sup> Turnover was calculated as a percentage between the number of exits (including the expiry of fixed-term contracts) and the number of employees at 31/12.

In 2017, the reduction in turnover derived from a lower number of voluntary terminations of employees in possession of pension requirements compared to previous years.

Specific studies and simulations were carried out within the context of the Business Plan to assess the Group employees eligible to retire in the 2018-2030 period. Consequently, the Group is making preparations to handle employees that are eligible to retire in the next 5/10 years, accounting for possible organisational changes to work and the new skills needed.

Within the Group there are no specific pension plans, however, all legal and contractual obligations are respected.

## HOURS WORKED AND HOURS OF ABSENCE

From the over 9.9 million hours worked in 2017, more than 94% were normal working hours, and a decrease of over 37,000 hours in overtime was recorded.

Hours worked (no.)		2017	2016	2015
Normal working hours	working	9,370,018	9,305,193	9,124,531
Overtime		579,732	616,820	508,212
<b>TOTAL</b>		<b>9,949,750</b>	<b>9,922,013</b>	<b>9,632,743</b>



In 2017, sick leave (ratio between hours of absence due to illness and hours worked) was 4.8%; compared to 2016, a reduction of over 1,000 hours for illness was recorded.

The absenteeism rate was 4.9% and is calculated on the ratio between days of absence (illness, accident, strikes and other types of absence) and working days (the days of the year for each employee, excluding Saturdays, Sundays and midweek holidays, multiplied by the average number of employees).

Hours of absence by type (%)	2017	2016	2015
Sick leave	59	57	54
Maternity leave	5	5	10
Accident	9	7	10
Strike	1	1	-
Trade union meetings and leave	4	3	6
Other absences (paid and unpaid)	22	27	20
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>

## REMUNERATION SYSTEM

The Group adopts national collective labour agreements (the main ones include: "Electricity sector employees", "Gas and water sector employees", "Environmental services employees") which ensure contractual salaries are paid to all employees. All employees are covered by National Collective Labour Agreements.

In 2017 the stabilisation policy was completed for workers with leasing contracts, who generally receive the same remuneration as provided for by contracts of Group employees (including performance bonuses). Furthermore, there are no differences in benefits for full-time employees, employees with fixed-term contracts or part-time employees.

*Group employees receive national collective labour agreements and incentive tools in line with company values*

Variable remuneration linked to performance (e.g. on call) and the achievement of company and individual targets is added to fixed remuneration. In 2017, the ratio between the highest annual remuneration and the median remuneration of all other employees was 3.4, while the ratio between the increase of the highest remuneration of the Group and the increase in the median remuneration of all other employees was 4.8. The Group's average basic salary by gender is 1.05 compared to the average local salary by gender (source: Istat 31/12/2016).

## BONUS SYSTEM

The remuneration and merit policy of the Group aims to reward employees that achieve certain results in line with company values and in accordance with adequate levels of quality and productivity. In particular, personnel are required to be flexible in adapting to new

working methods and to demonstrate remarkable professional commitment in terms of versatility.

**Performance bonuses.** Collective performance bonuses are provided to increase personnel involvement and encourage the achievement of Group objectives. This is set in accordance with the strategic and management objectives pursued, enhancing the correlation between compensation and attained results. Several factors are taken into account to determine the compensation, which are connected to incentivising company productivity, service levels and the achievement of specific profitability objectives. Once again for 2017, specific agreements were approved on the subject and bonuses may be paid in the form of one-off compensation via welfare instruments to non-management personnel.

**Management by objectives system (MBO).** In most Group Companies, individual targets are set for all senior managers, junior managers and employees that hold important positions, which, when achieved, are paid the amounts that were defined at the time when the targets were given. The definition of an "objective-based system" based on the measurable indicators (economic-financial, operative, sustainability or relevant to strategic projects) occurs in line with the company's mission through several levels of development.

**One-off compensation.** Across all Group Companies a one-off incentive can be paid to employees that have achieved particularly positive results through remarkable work commitment, mainly through projects or innovative activities. The people to receive bonuses are identified after meticulous analysis of individual performance results, which is conducted by their various managers.

For 2017, 66% of employees will receive a formal performance evaluation. The figure is in line with the previous year, as the calculation criteria for the population to be assessed has remained the same, in line with the defined policies. Furthermore, the project to define the Group's new skills and performance assessment system, which began in 2016, was completed.

Overall, the allocated amounts of variable remuneration are given in the table below.

Variable remuneration (thousands of Euro) <sup>(1)</sup>	2017	2016	2015
Performance bonuses	12,133	11,266	11,709
MBO	2,882	3,187	2,988
One-off compensation	2,001	1,923	1,555

<sup>(1)</sup> Amounts allocated.

## PERSONNEL SELECTION AND DEVELOPMENT

### SELECTION SYSTEM

At Iren Group, the personnel search and selection process is based on the principles of equity and transparency, which are also declared in the Code of Ethics, and is structured in compliance with Italian Legislative Decree 231/2001. Before searching for



candidates outside the Group, normally a verification process ensures that there are no internal candidates with profiles that are consistent with the position to be filled. The external selection process begins when there are no suitable internal applicants.



The Group has created a specific portal, “IrenFutura”, to manage personnel recruitment. Here, active searches are published for which individuals can apply. Applicants can select the advertisement that best meets their skills and interests or submit their application without attaching it to a specific advertisement. For some particular positions (managerial or extremely specialised) the search may be activated through other channels (such as head hunting companies). All candidates are always assessed by professionals with experience in the sector, based on well-defined and transparent criteria, which are shared between the company divisions and departments involved. Every CV is assessed on the basis of how well it matches the requirements of the position that the Group is looking to fill. If the profile does not meet the requirements of the position, the candidate will receive a response and the CV will be held in consideration for other relevant positions. If the profile meets the requirements, it is included within the selection process.

Selection processes may include various types of tests (technical, practical, etc.), as well as interviews, so as to gain in-depth knowledge of applicants and to guarantee fairness and transparency. At the end of the selection, the applicants receive feedback on the outcome of the process: in the event of a negative outcome, the applicant is taken into consideration for other relevant positions; in the event of a positive outcome, the person is integrated into the Company by providing a process defined on the basis of the position to be covered.

The Group has also joined the national *Garanzia Giovani* (Youth Guarantee) programme, activating the planned internships as the preferred search and contact tool with the world of work.

## PERSONNEL DEVELOPMENT

In order to govern all the processes connected to personnel management and development in a unified and systematic way – faced with the dual necessity of addressing the challenges of the future and preparing consistent policies – the Group has put in place two projects in 2016 to define the new “Iren Model” (Group Job System), which were fully implemented from 2017.

The Job System is a model to analyse and understand the professional skills present within the Group, transversally across the companies, businesses, divisions and departments in which they are found. Their main elements consist of professional areas, professional groups, the sub-groups and standard jobs. Essentially, this constitutes the logical infrastructure on which the main human resources management processes stand, including skills training and development.

Specifically, within the Job System, each standard job is weighed, in relation to the contribution that each role within the organisation provides in the creation of value, with a shared platform for internal comparison, as well as with the market. Management bands (groupings) were identified on the basis of the weight of the positions, which were then divided into sections, into which each of the roles present are characterised by the same complexities and responsibilities, managerial skills and management policies.

The managerial skills that must be put into effect in order to achieve business results in accordance with the means and values that characterise the Group – and which constitute supportive elements in evaluating personnel performance – were defined alongside the band system adopted. The expected professional knowledge and skills were also defined for each standard job, being fundamental not only for the performance management system, but also for other personnel management processes (first and foremost, training and internal mobility).

In 2017, skill monitoring and evaluation activities were implemented via dedicated tools for each band and group.

A performance management system was also implemented – aimed at the full implementation of all Group resources – with a set of objectives for each professional band and group (connected to the MBO system for higher bands), referencing the economic-financial dimension, the customer and service dimension, the effectiveness of internal processes dimension and the personnel dimension.

The remuneration policy, within the context of defined budget guidelines, will remain based on performance evaluation, taking into account, however, the remuneration package of the people holding the evaluated positions. In any case, any form of discrimination based on gender, age and/or health will be avoided by the continuous implementation of retraining initiatives in the event that personnel are unfit for previous or similar responsibilities.

## TRADE UNION AND INDUSTRIAL RELATIONS

The Group has always focused heavily on proper industrial relations, based on legislation and company and national collective labour bargaining, in compliance with the national collective labour agreements (CCNL) of reference for the Group.

In relation to the focus that aims to guarantee coherent economic and legislative treatment within the Group and to simplify management, in 2017, discussions with the Trade Unions





continued and the first harmonisation agreements were reached on issues such as working hours and business trips. More significantly, a new Industrial Relations Protocol was signed, which is consistent with the changes that have occurred within the Group and the new regulatory-contractual system of reference. This new Protocol, in addition to specifying the various levels of dialogue content (Group, company and local area) and the procedures articulating the industrial relations system (information, consultancy, dialogue and contract), in compliance with the National Collective Labour Agreement of reference, introduces instruments for developing participation and launches the process for electing company trade representatives in all Group Companies.

Furthermore, in 2017, a new agreement was signed that governs the voluntary redundancy plan for personnel who have acquired pension rights in the years 2018-2020 (Article 4, Italian Law 92/2012). This agreement is a fundamental prerequisite for the continuation of the employee demographic balancing plan and for the launch of a recruitment plan aimed primarily at young people.

During 2017, the renewal cycle of the National Collective Labour Agreement of reference was completed with the signing of a single National Collective Labour Agreement for the gas/water sector. The Group actively contributed by participating in the work of the employer's association, Utilitalia.

In addition, at the end of 2017 an agreement with the Trade Unions was signed for the application of the Group's National Collective Labour Agreement of reference to around 50 employees, coming from acquired Companies, who held the Metalworker National Collective Labour Agreement. In addition, an agreement was reached with FederManager for the harmonisation of the collective economic and regulatory treatment of the Group's senior managers.

Company Management informed the Trade Unions of all significant organisational changes (such as the establishment of new business units or changes to the organisation of work within existing units) during specific meetings in order to seek shared solutions where possible. Therefore, service orders or notifications were issued and distributed via the company Intranet and/or email and distributed internally to employees without computers, also by posting them to company notice boards.

In regard to changes to working hours, the National Collective Labour Agreements applied by the Group require that the Management inform the Trade Unions, convene a consultation meeting and define the times (of a maximum duration of 10 to 20 days) for the conclusion of discussions on the topic, upon which the Parties can take the action deemed most appropriate. The contracts also regulate transfers, stating:

- at least 30 days' notice in the instance that an employee is to be transferred to another municipality;
- in the case of collective transfers, notification to the Trade Unions in due advance.

In 2017, the Group definitively lost six cases and administrative proceedings concerning employees and former employees, which entailed a total expense of around € 163,000.

## EQUAL OPPORTUNITY

The Group guarantees the absence of discrimination when applying personnel selection, hiring, training, management, development and remuneration policies, as provided by the Code of Ethics. This commitment has guaranteed that no related breaches occurred in 2017, continuing the past trend.

*There were no breaches connected to discrimination in 2017*

The Group has been running a series of "diversity" programmes for years which, starting from 2015, saw commitment and consistent structuring with the establishment of a body called Personnel Welfare and Services. Among other things, this focuses on diversity management: the application of inclusion policies that recognise and find value in differences, actively managing them and leveraging on them to increase the company's competitiveness. Specifically, the main issues of focus are gender, age, disability and differences in nationality, all areas in which the Group has implemented various programmes and initiatives.

Additionally, a *smart working* project is currently being assessed which - considering the Group's experience with telecommuting - will be widespread in terms of the employees involved, in order to increase the capacity of the company to meet needs with a view to diversity management.

## FEMALE PERSONNEL

**Female personnel within the Group amounts to approximately 26% of the total that is 1,603 people: a presence affected by the specific technical and occupational characteristics of the business and by the related reduced offer, within the work and education markets, of female professionals that meet such characteristics, which has nonetheless increased compared to previous years.**

Personnel by position and gender	2017		
	Total no.	Women no.	Women %
Senior managers	89	13	14.6
Junior managers	265	66	24.9
White collar workers	2,918	983	33.7
Blue collar workers	3,013	541	18.0
<b>TOTAL</b>	<b>6,285</b>	<b>1,603</b>	<b>25.5</b>

The policies that have been implemented on the non-discrimination front during the selection stage, as well as in regard to skills development, promotion of women's managerial skills and development work-life balance tools, have increased the attractiveness of the Group for women, also within professions that are typically characterised by a strong technical component, historically "reserved" to an overtly masculine population. The recent hires of young female graduates, even into strictly technical

sectors such as waste or site&network engineering, is evidence of this.

The majority of female personnel (approximately 65%) are found as junior managers and white collar workers (overall this constitutes around 51% of total personnel). The analysis conducted on female workers, also in consideration of the fact that mainly technical activities are carried out, revealed a non-discriminatory situation for women, who represent approximately 33% of junior managers and white collar workers.

*The presence of women amongst junior managers and white collar workers is higher than that in the overall Group population*

Equal remuneration between men and women is ensured by the application of the National Collective Labour Agreements in which minimum salaries are defined for each category. The average basic remuneration per position held by women (details are available in the "Iren Personnel: the numbers" section at the end of this section) is slightly lower than that of men, due to three factors: a greater percentage of women working part time (approximately 13.2% of total female population), lower average length of service for women compared to men, the strong incidence of specialist technical roles that are linked to historically male education. Through careful selection policies and the introduction of a reward system aimed at defining consistent policies for all company personnel, the Group has set itself the objective, insofar as possible, of rebalancing this situation, also in consideration of the labour market of reference.

In line with that provided by the Articles of Association concerning equal access to the administrative and control bodies of listed companies (Italian Law 120/2011), in Iren and in the top-level Companies, gender balance in the set-up of the governing bodies is ensured. On the whole, on the Boards of Directors for Group Companies there are 24 women, amounting to approximately 27.3% of total members (88 people of which 39.8% in the 30 to 50 age group and 60.2% over 50). Women represent 46.2% of the members on the Board of Directors of the parent company.

In 2017, 118 women took maternity leave, also taking advantage of the various options for working hours that the Group makes available and the specific training that the company provides in these cases, as well as the services described in the Corporate Welfare paragraph. Upon their return to work, all employees were able to resume the job they had filled before their period of absence or a job with equal professional content in cases where organisational changes occurred in the meantime that meant they could not return to the same position.

## PROTECTED CATEGORIES

Iren Group takes care to provide disabled personnel with conditions that facilitate their integration in the working environment and operates in compliance with current legislation on the subject.

Personnel belonging to protected categories	2017	2016	2015
Number of employees	315	317	323

## CORPORATE WELFARE

The Group is creating a coherent and well-structured welfare system to meet the needs of the different personnel segments and to extend the best practices to the whole Group, and is also involving the Trade Unions in this process. The programmes that have already begun are implemented through a series of initiatives focused on the needs of the person and the family unit.

### PREVENTION PROGRAMMES

In the Genoese area, 644 employees joined the "Welfare Project", which offers the possibility to make use of regular health check-ups, on a voluntary basis, adjusted for age and gender, against the payment of a biannual contribution of € 10, which is donated in its entirety to the Gaslini Institute in Genoa.

In Parma, and for members of the CRAL ARTA association in particular, employees can join a prevention programme that includes specific health checks.

### SUPPLEMENTARY PENSION COVERAGE

Since the legislation reforming the supplementary pension system came into force, employees have been able to decide how to use their employee severance pay. They can either leave it with the company or put it in one of the pension funds provided for by law, which ensures another pension to supplement the compulsory government-managed pension and thus a higher coverage. Due to the number of participants, the ones that stand out are the pension funds established by collective bargaining, which can only be joined by workers applicable for certain collective agreements. The main funds for Iren Group employees are as follows: Pegaso (Electric or Gas-water National Collective Labour Agreement), Previambiente (Environment National Collective Labour Agreement), Cometa (Metalworker National Collective Labour Agreement) and Previdai for senior managers. As at 31 December 2017, 4,483 employees had joined a supplementary pension fund, including employees enrolled in open-end funds. Iren Group paid a total of € 2,837,753 to the Funds, as the Company's contribution.

Employees can also make use of a pension support and advice service.

### PERSONNEL INSURANCE COVERAGE

Almost all employees in junior management, white collar and blue collar positions are insured by a policy stipulated by the Company for death or total or partial permanent invalidity due to accidents at and outside of work. Insurance coverage in the case of accidents (even ones which occurred outside of work and in the case of occupational illness) and life insurance is provided for all senior managers, as per the provisions of the Confservizi National Collective Labour Agreements for Senior Managers.

### SUPPLEMENTARY HEALTHCARE

Through their membership to supplementary healthcare funds, healthcare coverage is given to employees in relation to their National



Collective Labour Agreement (Fasi for Gas-water contracts, FASDA for Environment contracts and Metasalute for Metalworker contracts). The Electricity National Collective Labour Agreement provides for the payment of contributions to CRAL associations for healthcare activities. Specially constituted funds manage the payment of healthcare benefits that ordinary members (employees) and their dependants can benefit from. All senior managers, for whom primary healthcare coverage is provided by their membership to Fasi, are also supplied with supplementary health insurance (Assidai), which refunds additional healthcare costs that are not reimbursed by Fasi.

#### ADVANCE ON EMPLOYEE SEVERANCE PAY

Employees may benefit from better conditions than those provided by the legislation in force by applying for an advance of their employee severance pay more than once to pay for healthcare, to buy their first house, renovate an existing property, restructure or modify buildings in order to remove architectural barriers and in other specific cases.

#### PENSION BENEFITS

Retired employees, and their dependants, can remain members of Group leisure, cultural and sports associations and thus take advantage of a significant part of the offered services. Former employees that were granted a discount on electricity or gas during their careers also retain this option when retired, as do their spouses in the case of their death.

Retired senior managers, whose last working relationship elapsed while holding the position of senior manager, which lasted not less than one year, can keep their subscription to the Fasi supplementary healthcare fund and make use of the benefits provided. The healthcare also covers any dependants and, in the case of their death, those who hold survivors' pensions.

The electricity sector National Collective Labour Agreement provides for additional monthly payments to the leaving entitlement for employees who leave service with 40 years of contributions or are 60 years of age.

#### QUALITY OF LIFE FOR QUALITY OF WORK

The Group pursues a management policy that promotes and supports:

- the right balance between working life and a private life, making available a range of opportunities to its employees that allow them to reconcile work commitments with personal needs (flexible working hours, telecommuting, part time, ultra day flexibility, brief permitted absences and short paid leave, the integration of obligatory maternity leave services, subsidised daycare and conciliation help desks);
- a series of facilitations with the aim of improving the quality of life of its employees, with constant economic commitment: company cafeterias that prepare fresh food, meal vouchers, food service discounts, company cafés that offer regulated prices, internal parking for private cars, subsidised tariffs or contributions for buying subscriptions to the local public transport network.

#### MODELS FOR FLEXIBLE WORK ORGANISATION

**Telecommuting** - Group employees on the Electricity National Collective Labour Agreement can take advantage, on a voluntary

basis, of part-time telecommuting, which was introduced to the company with a specific agreement. For employees on other contracts, telecommuting, with the same criteria, may be permitted via individual agreements. The Company prioritises requests motivated by life balance needs (caring for children and the elderly, personal or family member health problems, the distance between their home and place of work, etc.).

**Part time:** all employees can request part-time hours (horizontally, vertically, or mixed), on a voluntary basis and always reversible, without the exclusion of the benefits provided for employees with full-time contracts.

Part-time contracts (no)	2017	2016	2015
Women	211	208	201
Men	35	35	34
<b>TOTAL</b>	<b>246</b>	<b>243</b>	<b>235</b>

#### INITIATIVES FOR EMPLOYEE WELFARE

Looking to promote the well-being of its employees, Iren Group has chosen to:

- meet personnel needs in regards to well-being and conscious consumption in company cafeterias. The new management of 7 cafeterias was awarded by way of tender and, in regards to service requirements, modernisation work to the dining halls, stringent controls and samples to check compliance with health protection contractual and legal provisions and particular attention to the quality of the ingredients used were requested. The "Sustainable Cafeteria" project was also created, which will see the involvement and active participation of all employees to achieve common environmental and social objectives;
- offer all employees, on a voluntary basis, the option of allocating a portion of their 2017 performance bonus to company welfare initiatives, following on from an agreement with the Trade Unions. By accessing the specially dedicated Iren Welfare Portal, employees can attain – within the limits of the allocated amounts – refunds and/or goods and/or services in the following areas: family, healthcare fund, mortgages, supplementary pensions, sports, culture and leisure and trips. Overall around 4,000 employees are subscribed to the Portal – presented in specific meetings to also reach peripheral offices – which, in 2017, managed around € 900,000 Euro, including an additional amount paid to all employees that can be used exclusively for corporate welfare, as provided by the trade union agreements;
- offer all employees the option of purchasing, for the third consecutive year, part of the IT and telephone tools that they currently use under favourable terms, in the case of replacement when they become obsolete or when they terminate their service.

#### LEISURE, CULTURAL, SPORTS AND HEALTHCARE ACTIVITIES

Through the company leisure clubs, which are present in various areas, employees are also offered leisure, recreational, sports and cultural activities. Aiming to increase sociability between employees, the following are available: the Employees'

Recreational and Cultural Club in Genoa, Adaem and CRAL AMIAT in Turin, the Quercioli Club in Reggio Emilia, CRAL AMPS and CRAL ARTA in Parma, CRAL ANIA in Piacenza and the CRAL ADAM of ASM in Vercelli. The proposed activities are mainly made up of sports, tourist and cultural activities, courses, company parties and charitable initiatives. They are held in dedicated locations or through agreements (trips, summer camps for children, etc.). Some associations contribute to the educational expenses of employees' children, as well as allowing school books and stationary to be purchased at discounted prices. The clubs also enter into commercial agreements in the areas of interest to allow employees to purchase products and services at discounted prices. For employees with electricity contracts, the clubs provide healthcare insurance through contributions to cover expenses incurred, as well as preventative medicine programmes. The clubs are almost entirely funded by the Group, which also makes the spaces and equipment required to carry out the activities available to them through a special free loan.

Contribution paid (Euro)	2017	2016	2015
Leisure activities	731,687	853,992	927,295
Healthcare activities	1,891,104	1,451,760	1,133,262
<b>TOTAL</b>	<b>2,622,791</b>	<b>2,305,752</b>	<b>2,060,557</b>

## INTERNAL COMMUNICATION

Internal communication is an essential tool for accelerating the development of processes, assisting and supporting organisational changes and new business strategies, developing a common corporate culture and directing efforts towards achieving company objectives, which become shared objectives that can be pursued through each person's contribution.

Particular importance was given to the design and creation of the new company Intranet to make it responsive and accessible off-site when employees are on the move. In addition to the technical and design aspects, the layout of the individual sections was completely overhauled, also in order to favour the use by personnel of Companies which have recently become part of the Group.

The company Intranet "Noi Iren" is the most important internal communication tool: on average around 3,000 users connected to it each day, while page views have risen exponentially in 2017, amounting to an average of 300,000 per month.

"Noi Iren" represents the knowledge map of the whole Group and is the access point for company applications. Organisational (notifications, the staff structure, QSA policy), regulatory (service orders, model 231) and corporate (acquisitions, non-recurring transactions, in addition to the meetings of the Board of Directors, the business plan) information is published on the Intranet.

The Intranet also disseminates news from the Iren Informa magazine and an internal notice board was created for the sale and exchange of items between personnel. Cultural information is also conveyed through the Intranet, which aims to involve and encourage participation - both free and at discounted prices - in sports, artistic, theatre and musical initiatives supported by the company held in the various areas.

Employee engagement is also encouraged through the organisation of company events and initiatives which include the participation of workers and their family members with the aim of increasing their sense of belonging to the Group.

In this direction, the Group decided to create the third edition of "Bimbi in ufficio con mamma e papà" (Children in the office with Mum and Dad) in 2017, sponsored by the newspaper Corriere della Sera. This initiative is aimed at bringing children into their parents' work environment. During one day in September, the headquarters in various areas were opened to employees and their family members, with a guided tour that was also suitable for children. An educational activity was prepared for everyone, illustrating good practices concerning ecology and energy savings. Around 750 people took part in the initiative, including 370 children, and it was greatly appreciated by everyone.

The end-of-year meetings in Piedmont, Emilia and Liguria were also very engaging and popular, which saw the participation of over 1,200 people involved in artistic performances to entertain colleagues. The topic was the development of company talent.

The "Iren Informa" magazine has also been completely updated in terms of graphics. This is an instrument that has shown to be particularly valuable for internal communication and for the possibility to involve, reward and enhance Group initiatives that would not be particularly newsworthy in traditional media, improving the ranking on search engines of service news concerning the Group for residents. Articles, editorials and interviews are enhanced with photo galleries and videos. A monthly newsletter is also created that features the main topics discussed and is sent by mail to all Group employees and to the over 100,000 subscribers.

Furthermore, in 2017 internal communication supported the launch of the commercial offer called "Dipendenti & Friends" (Employees & Friends), an opportunity that also allows friends and relatives of Group employees to sign electricity and gas supply contracts, taking advantage of more favourable conditions compared to those offered on the market.

## PERSONNEL TRAINING

Training is a crucially important tool in growing and enhancing human resources, alongside the development strategies and values of the Group, and plays a fundamental role in meeting needs of innovation and change that the market dictates in order to be competitive.

Training focuses on the development of specialist technical competencies and managerial skills within the perspective of life-long learning.

*Training is a fundamental factor of professional development and growth within Iren Group*





In line with the Group Job System (see page 97), in the second quarter of 2017 the first stages of the survey begun, which involved over 700 people.

The analysis of the gaps which emerged – although only a part of all company personnel has been analysed – provided a guide to the main intervention needs in terms of priorities and new skills that must be acquired by personnel due to the re-engineering works of processes, which will form the basis for the development of the new Group training plan.

Once again in 2017, the training process was carried out by analysing the needs identified in the various Group structures and the design and implementation of initiatives (both internal and external “catalogue” courses) in line with the needs that emerged.

The training provided was subject to efficiency evaluation through participant satisfaction and learning analysis and the monitoring of a set of indicators that allowed the offer to be improved.

All initiatives are managed through the use of a dedicated management application (Training Portal), which is updated continuously with employees’ personal data and is connected to an open-source platform for the creation and distribution of e-learning courses.

Participation is tracked and helps to enhance employees’ training qualifications, which can be consulted by the employees themselves, their managers, the Personnel Department and by the Prevention and Protection Service Manager. The Training Portal is also integrated with the “Gamma” app for security management, in order to allow for training needs to be constantly updated in relation to the risks to employees and the security responsibilities assigned to them, as well as precisely monitor the expiry dates of the relative updates.

In 2017, the training activities were focused on the planning and implementation of initiatives to support the change management processes, as well as training courses to reinforce technical-professional, managerial and transversal skills.

The managerial seminars are of particular relevance in terms of the participation and interest they garner. They are aimed at all Group management (over 300 people) with a view to help build a shared culture, starting with reflection on certain key words for the Group’s development.

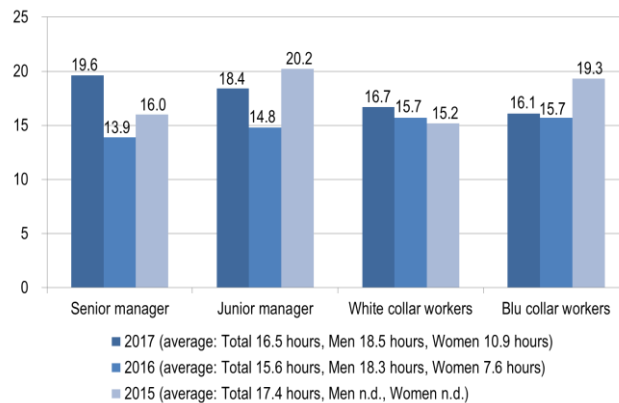
In 2017, Group employees (including apprenticeships and workers with leasing contracts) received around 104,000 hours of training (+7% compared to 2016), with over 5,500 employees participating in at least one training initiative, equal to 88% of total personnel and a per capita average of 16.5 hours.

Employees involved in at least one training course (%) <sup>(1)</sup>	2017	2016	2015
Senior managers	100.0	89.5	94.0
Junior managers	100.0	95.5	96.0
White collar workers	100.0	94.0	96.7
Blue collar workers	75.0	73.2	80.0
<b>TOTAL</b>	<b>88.21</b>	<b>84.0</b>	<b>88.6</b>

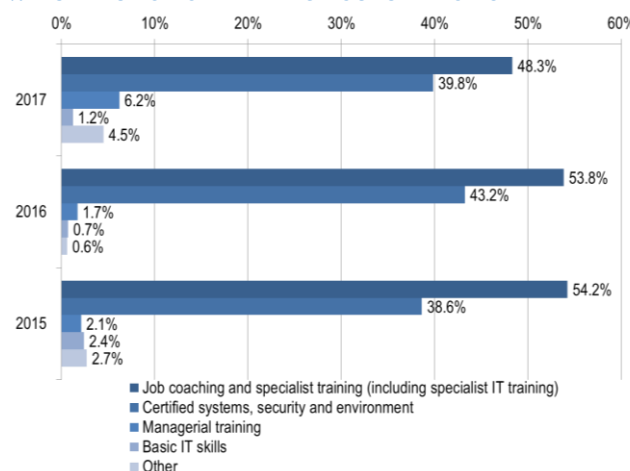
<sup>(1)</sup> The percentage is calculated by dividing the number of people involved in at least one training event by the average annual number of employees.

Average hours of training by position	2017	2016	2015
Senior managers	1,786	1,325	1,328
Junior managers	4,827	3,629	4,951
White collar workers	48,478	45,132	44,143
Blue collar workers	48,542	47,084	57,514
<b>TOTAL</b>	<b>103,633</b>	<b>97,170</b>	<b>107,936</b>

#### HOURS OF TRAINING PER CAPITA BY POSITION AND GENDER



#### % DISTRIBUTION OF TRAINING HOURS BY TOPIC



The internal planning activity of training initiatives was confirmed as a strong point for 2017. Teaching was given by both internal trainers and external consultants (so-called internal training), which was 90% of total hours, with the development of around 350 courses across over 2,000 editions. Only 10% of the initiatives was purchased from catalogues (so-called external training). Once again in 2017, the satisfaction index for training was positive (80%), as was the learning index, amounting to 94%, which confirms the positive trend of the previous year.

The economic investment in training, net of internal personnel costs, was around € 570,000 for 2017, of which over 91% was self-financed by the Fonservizi fund, which sets aside resources, as mandatory insurance for involuntary employment, which can be used to create training plants, shared with social partners.

The Group makes its competencies available to the schools and universities within the areas that it operates to create study, research and combined school/work projects. It has developed

agreements with all the Universities in the reference areas, within which collaborations on training and recruitment activities are envisaged. During 2017, Iren organised:

- its presence at career days organised by Universities to encourage undergraduates, graduates and companies to meet. In addition to attending a Group presentation, students can also be interviewed and put forward their CV. The Group participated in 4 events, meeting 180 students;
- selection contests, performed with a group assessment format based around role playing that aims to identify the best students. The Group organised 2 contests, with 126 candidates submitting their CV, in which it involved 35 students in assessment activities, selecting 6 talented students that joined extra-curricular internships within the Group.

## OCCUPATIONAL HEALTH AND SAFETY

The Group considers it to be an investment to dedicate human, professional, organisational, technological and economic resources to occupational health and safety, as it believes it to be fundamentally important to protect workers and includes among its objectives not only compliance with the provisions laid down by the law, but also measures taken with a view to continuously improving working conditions.

Monitoring of the Safety Management System is ensured in every Company of the Group by a unique Environment and Safety Service located in the parent company. This guarantees the uniformity of the risk evaluation methods, the identification of organisational, procedural and technical measures and the identification of the required personnel training on the subject of occupational health and safety. Specific codified and systematic audit procedures allow for the monitoring and the continuous improvement of this system to be pursued.

No specific initiatives or programmes limited to serious illness are planned, however, numerous initiatives and programmes concerning welfare and general prevention are planned, both at the level of the various contracts and through specific company agreements.

In 2017, for occupational health and safety, electromagnetic fields were monitored and the relative Risk Assessment Documents were prepared, for hydroelectric production plants in Campania, thermoelectric production plants in Piedmont and Liguria and district heating in Piedmont, Emilia and Liguria.

At least once a year, meetings are held with Worker Safety Representatives (RLS) across all areas. For Companies in the business unit network, two meetings are usually held per year. In 2017, several meetings were held for the Company Ireti about the progress of activities concerning occupational health and safety. In the Turin area there are specific Management Committees that process and monitor all aspects of health and safety. Furthermore, monthly meetings are organised between the Management

Representative, Worker Safety Representative, Occupational Health Physician and the Company's Prevention and Protection Service.

A stringent conception of safety entails total engagement on the behalf of employees that, according to the activity performed and the respective skills and responsibilities, are required to play an active role in prevention. Therefore, particular attention is paid to training and information activities for employees on topics of health and safety at work. With regard to employees, continuous monitoring elements are constituted by the analysis of individual accidents and near-accidents and planned supervisory inspections. There are no employees exposed to a high risk of occupational diseases within the Group.

## AGREEMENTS WITH HEALTH AND SAFETY PROTECTION TRADE UNIONS

The issue of protection and safety at work is present in all Electricity National Collective Labour Agreements applied within Iren Group. There is a specific dedicated section in the Group's Industrial Relations Protocol and specific agreements have been signed that regulate special content (e.g. business trips).

The focus on accidents is also demonstrated by the provision of specific objectives, provided within the MBO system, of containment or prevention, assigned to the Managers of operational structures most exposed to these risks.

Relationships with Workers' Safety Representatives are regulated by a specific procedure, especially given visit methods and inspections of the work environment and the management of reports received by the same Representatives.

### MAIN INDICATORS OF HEALTH AND SAFETY

Accident indexes <sup>(1)</sup>	unit of measure	2017
<b>Total number of accidents</b>	no.	295
<b>Hours worked</b>	no.	9,949,750
<b>Frequency index</b> (Total number of accidents/hours worked x 1,000,000)	-	29.65
<b>Days of absence due to accident</b>	days	9,266
<b>Severity index</b> (days of absence due to accidents/hours worked x 1,000)	-	0.93
<b>Incidence index <sup>(2)</sup></b> (total no. accidents/total no. employees x 1,000)	-	47.11
<b>Mean duration of absence for accidents</b> (days of absence due to accidents/total no. accidents)	days	31.41
<b>Accidents during travel</b>	no.	75

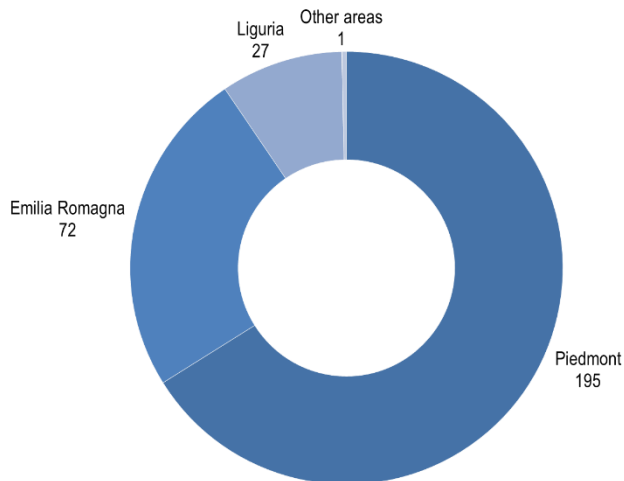
<sup>(1)</sup> For the purposes of calculating the indexes, occupational, random and road accidents in the accident registers of Group Companies are considered. Commuting accidents and those not recognised by INAIL are excluded.

<sup>(2)</sup> The incidence index is calculated considering the average number of employees.

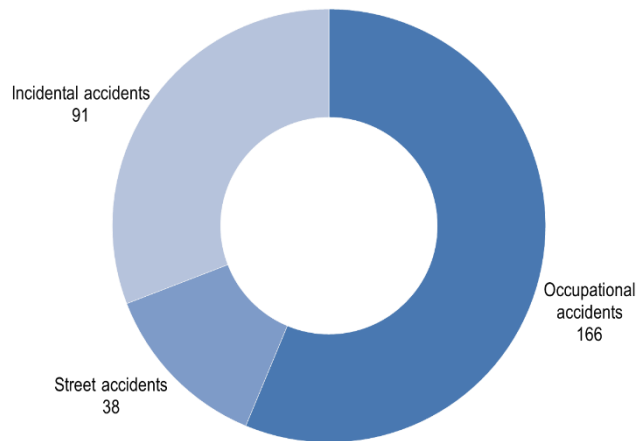
Compared to 2016 there was a decrease in the frequency index and a sharp reduction in occupational accidents at a Group level.



## ACCIDENTS PER GEOGRAPHIC AREA



## ACCIDENTS PER TYPE



In the paragraph "Iren People: the numbers" is the breakdown of the accident indicators for the last three years.

## IREN PEOPLE: THE NUMBERS

Personnel at 31/12 by position, contract type and geographic area	2017		2016		2015	
<b>Position</b>						
Senior managers	89	1.4%	95	1.6%	82	1.3%
Junior managers	265	4.2%	251	4.0%	238	3.9%
White collar workers	2,918	46.4%	2,878	46.2%	2,859	46.6%
Blue collar workers	3,013	48.0%	3,002	48.2%	2,953	48.2%
<b>Contract</b>						
Employees with permanent contracts	6,129	97.5%	6,146	98.7%	6,076	99.1%
Employees with fixed-term contracts	34	0.5%	12	0.2%	16	0.3%
Apprenticeship/in-house training contract	122	2.0%	68	1.1%	40	0.6%
<b>Geographic area</b>						
Province of Turin	2,813	44.8%	2,813	45.2%	2,835	46.2%
Province of Vercelli	225	3.6%	235	3.8%	n.a.	n.a.
Province of Genoa	1,028	16.3%	1,012	16.2%	1,032	16.8%
Province of Reggio Emilia	747	11.9%	747	12.0%	787	12.8%
Province of Parma	715	11.4%	707	11.3%	740	12.1%
Province of Piacenza	541	8.6%	527	8.5%	535	8.8%
Other provinces	216	3.4%	185	3.0%	203	3.3%
<b>TOTAL</b>	<b>6,285</b>	<b>100%</b>	<b>6,226</b>	<b>100%</b>	<b>6,132</b>	<b>100%</b>

Personnel at 31/12 by position and gender	2017			2016			2015		
	Total	Women		Total	Women		Total	Women	
Senior managers	89	13	14.6%	95	14	14.7%	82	10	12.2%
Junior managers	265	66	25.0%	251	57	22.7%	238	53	22.3%
White collar workers	2,918	983	33.7%	2,878	958	33.3%	2,859	922	32.2%
Blue collar workers	3,013	541	18.0%	3,002	542	18.0%	2,953	549	18.6%
<b>TOTAL</b>	<b>6,285</b>	<b>1,603</b>	<b>25.5%</b>	<b>6,226</b>	<b>1,571</b>	<b>25.2%</b>	<b>6,132</b>	<b>1,534</b>	<b>25.0%</b>

Mean personnel age by position (years)	2017	2016	2015
Senior managers	53	53	55
Junior managers	52	52	51
White collar workers	49	49	49
Blue collar workers	48	47	48
<b>OVERALL AVERAGE</b>	<b>49</b>	<b>48</b>	<b>49</b>

Personnel by qualification (%)	2017	2016	2015
Compulsory education	35	35	37
Professional institutions	13	13	14
Diploma	38	38	36
Degree	14	14	13
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>

Mean personnel by Business Unit	2017		2016		2015	
Holding	933	15%	905	14%	592	10%
B.U. Energia	648	10%	624	10%	956	15%
B.U. Mercato	464	8%	496	8%	444	7%
B.U. Networks	1,955	31%	1,901	31%	1,917	31%
B.U. Waste	2,262	36%	2,296	37%	2,307	37%
<b>OVERALL AVERAGE</b>	<b>6,262</b>	<b>100%</b>	<b>6,222</b>	<b>100%</b>	<b>6,216</b>	<b>100%</b>

Employees with a fixed-term and apprenticeship contract (no.)	2017	2016	2015
Employees with contracts expiring in the year	31	25	69
of which taken on during the year with a permanent contract	27	21	62

Personnel turnover by gender, province and age <sup>(1)</sup>	2017	2016	2015
<b>Gender</b>			
Men	3.0%	5.6%	N/A
Women	1.4%	3.0%	N/A
<b>Province</b>			
Province of Turin	3.0%	4.3%	N/A
Province of Vercelli	6.2%	5.1%	N/A
Province of Genoa	2.1%	4.6%	N/A
Province of Reggio Emilia	2.1%	6.8%	N/A
Province of Parma	1.5%	5.0%	N/A
Province of Piacenza	1.1%	3.8%	N/A
Other provinces	5.1%	10.8%	N/A
<b>Age</b>			
Under 30 years old	2.7%	3.8%	N/A
From 30 to 50 years old	1.6%	0.6%	N/A
Over 50 years	3.5%	9.5%	N/A
<b>TOTAL</b>	<b>2.6%</b>	<b>4.9%</b>	<b>6.4%</b>

<sup>(1)</sup> Turnover was calculated as a percentage between the number of exits (including the expiry of fixed-term contracts) and the number of employees at 31/12.

Average company service of departing staff by age and gender (years)	2017	2016	2015
<b>Age</b>			
under 30 years old	1	2	1
from 30 to 50 years old	9	8	4
over 50 years	28	29	30
<b>Gender</b>			
Men	22	26	25
Women	20	21	24
<b>OVERALL AVERAGE</b>	<b>22</b>	<b>25</b>	<b>25</b>

Staff taken on in the year by gender, province and position (no.)	2017	2016	2015
<b>Gender</b>			
Men	115	86	156
Women	37	22	40
<b>Province</b>			
Province of Turin	68	47	106
Province of Vercelli	4	9	n.a.
Province of Genoa	38	25	17
Province of Reggio Emilia	14	11	20
Province of Parma	18	8	27
Province of Piacenza	8	6	19
Other provinces	2	2	7
<b>Position</b>			
Senior managers	2	8	8
Junior managers	6	3	7
White collar workers	60	43	50
Blue collar workers	84	54	131
<b>TOTAL</b>	<b>152</b>	<b>108</b>	<b>196</b>





Ratio of basic average salary by gender and position	2017	2016 <sup>(1)</sup>	2015 <sup>(1)</sup>
	% Men/Women	% Men/Women	% Men/Women
Senior managers	98.7	93.5%	95.5%
Junior managers	94.4	97.4%	98.7%
White collar workers	86.4	91.1%	90.7%
Blue collar workers	92.0	93.0%	87.3%

<sup>(1)</sup> For the calculation of the average salary in 2016 and 2015, hires during the year, part-time employees and personnel whose remuneration is subject to recovery by social security institutions (maternity and parental leave etc.) were not considered.

Ratio of basic average salary by gender and geographic area	2017			
	Senior managers % Men/Women	Junior managers % Men/Women	White collar workers % Men/Women	Blue collar workers % Men/Women
Piedmont	107.3	96.2	89.7	95.6
Emilia Romagna	92.4	93.8	88.4	99.4
Liguria	85.7	97.4	79.0	n.a.
Other areas	n.a.	66.1	82.4	n.a.

Accident indexes <sup>(1)</sup>	unit of measure	2017	2016	2015
<b>Total number of accidents</b>	no.	295	341	370
<b>Hours worked</b>	no.	9,949,750	9,922,013	9,632,743
<b>Frequency index</b> (Total number of accidents/hours worked x 1,000,000)	-	29.65	34.37	38.41
<b>Days of absence due to accident</b>	days	9,266	7,876	12,094
<b>Severity index</b> (days of absence due to accidents/hours worked x 1,000)	-	0.93	0.80	1.26
<b>Incidence index<sup>(2)</sup></b> (total no. accidents/total no. employees x 1,000)	-	47.11	54.81	59.52
<b>Mean duration of absence for accidents</b> (days of absence due to accidents/total no. accidents)	days	31.41	23.10	32.69
<b>Accidents during travel<sup>(3)</sup></b>	no.	75	47	40

<sup>(1)</sup> For the purposes of calculating the accident indexes, occupational, random and road accidents in the accident registers of the Group Companies are considered. Commuting accidents and those not recognised by INAIL are excluded from the accident indexes calculation.

<sup>(2)</sup> The incidence index is calculated considering the average number of employees.

<sup>(3)</sup> The fatal commuting accident that occurred in 2015 was not included.

Accidents by gender (no.)	2017	2016	2015
Men	213	219	247
Women	82	122	123
<b>TOTAL</b>	<b>295</b>	<b>341</b>	<b>370</b>

# Suppliers



## IMPORTANT TOPICS



Sustainable management of the supply chain



Impacts on local areas (suppliers)



## POLICIES FOR SUPPLIERS

Iren Group considers its suppliers to be an integral part of the sustainability process. The goods and services purchased impact the quality of the services and the reputation of the Company: it was also for this reason that it was crucial to review the Suppliers' Register and develop the on-line Procurement Portal of Iren Group. These initiatives allow for better monitoring of the supply chain, which represents a strategic aspect in the management of the Group business activities.

From 2016, the Procurement Portal was adopted through which public procedures, called by way of calls to tender or competitive procedures, as well as procedures for invitation to tender, are managed. In 2017, the Group's new Suppliers' Register was implemented within the Portal, divided into product categories which are functional to business needs. When the supplier selects one, this opens an assessment questionnaire that includes a general section common to all product categories, and a specific section containing specific questions.

The population of the Register allowed greater involvement of qualified economic operators in the invitation of tenders throughout 2017.

### *The Group Procurement Portal is an instrument that extends the involvement of suppliers*

The adoption of the Procurement Portal, in addition to innovating and aligning with industry best practices, constitutes an important opportunity for economic operators interested in becoming suppliers of the Group, increasing opportunities for involvement. Within a perspective of absolute transparency and disclosure concerning engagement rules, the following are published on the Procurement Portal:

- the rules for admission to the Group's Suppliers' Register;
- the participation rules for managed negotiation events;
- the general conditions of use for the platform.

## QUALIFICATION, SELECTION AND MONITORING OF SUPPLIERS

The supplier qualification system used by the Group aims to guarantee that products, services and works are able to ensure quality and reliability. The supplier selection and management process is based on principles of transparency, clarity, integrity and non-discrimination.

In addition to qualitative aspects, those relevant to sustainability are also considered in the qualification process, with particular attention given to socio-environmental topics and the implications arising from the Code of Ethics of the Group.

It is of primary interest to the Group that all suppliers conduct their activities in compliance with the principles and values contained in the Code of Ethics, which must be obligatorily accepted by all suppliers, without the possibility of exceptions or amendments.

Within the context of contracts that are subject to the Code for Public Procurement, article 30, "Principles for awarding and executing contracts and concessions", requires economic operators to respect environmental, social and labour obligations when carrying out works, which are established by European and national legislation, by collective agreements or the international provisions listed in annex X, which include: ILO Convention no. 29 on forced labour, ILO Convention no. 105 on the abolition of forced labour, ILO Convention no. 138 on minimum age, ILO Convention no. 182 on the worst forms of child labour. Explicit declaration of compliance may be requested in tender documents.

Within public contracts for amounts of community interest, supplier qualification may be carried out, for each tender, by indicating the requirements of economic-financial and technical capacity in the calls, which are directly linked to the activity to which the call refers. These are requirements that must be proportional and such as to ensure competitiveness, according to the regulations in force.

Furthermore, it is also possible to establish qualification systems that are equal in value to the tender notice by publishing a community notice, on which negotiated procedures concerning the qualifying sectors are carried out, in accordance with the protocol defined by the founding regulations of the system.

With reference to awards that are attributable to excluded contracts (so-called under-threshold), or irrelevant to the contracts and concessions law, the Group refers to qualified economic operators on the basis of information on turnover, quality certification or other sector certifications and organisational data. Current provisions require that at least 5 suppliers from those included in the Register are invited, the management of which is centralised in the Parent Group.

The qualification to be part of the Suppliers' Register requires the verification of being in possession of the certifications issued by independent bodies (i.e.: possession of the ISO certifications, the SOA certifications, etc.), as well as the possession of the technical and economic eligibility requirements that are adequate for both the amount and nature of the tender and supply. Possession of the UNI EN ISO 9001 certification is assessed as being especially favourable within the context of supplier qualification.

During the qualification process suppliers are required to state:

- if, in line with UNI ISO 26000 guidelines on corporate social responsibility, company initiatives to develop a socially responsible approach to business planning and management have been identified and, if so, to describe the initiatives adopted;
- if the supplier publishes its Sustainability Report and, if so, to indicate the URL where it can be found, or to attach a copy or excerpt of the significant sections in the Sustainability Report;
- if the supplier is willing to carry out a CSR Audit, in the instance it were to sign one or more contracts with the Group, and if it is willing to complete a "CSR Questionnaire" (see the box below);

- not to have committed serious breaches, which have been definitively ascertained, against obligations concerning the payment of taxes and duties, or social security contributions, in accordance with Italian legislation or that of the State of establishment;
- not to have committed serious violations duly ascertained against occupational health and safety laws.

### CSR survey of suppliers

In 2017, Iren Group launched its first Corporate Social Responsibility survey on 2,408 suppliers via a questionnaire to analyse how environmental policy, labour practices, business ethics and respect for human rights were managed. Overall, 778 responded to the questionnaire (32% of the total). Below is a summary of the results.

- **Certifications:** 37% hold Environmental Certifications, 27% Occupational Health and Safety Certifications and 7% Corporate Responsibility and Business Ethics Certifications.
- **Code of Ethics and/or Conduct:** is adopted by 46%.
- **Environmental Policies:** 43% adopt formal environmental policies, mainly to reduce/recycle waste produced, reduce energy and water consumption and reduce external pollution. Only 0.6% had been subject to legal proceedings or been charged for breaches to environmental legislation/regulations in 2017.
- **Labour practices:** 70% adopt human resources management policies, mainly concerning employee health and safety management, work conditions, recruitment management, training and career development and gender equality. In 2017, respondents hired 1,162 employees (of which, 60% on permanent contracts, 56% under 30 and 48% women) and employed 4,735 workers for jobs carried out for Iren Group. Only 1% had been subject to legal proceedings or been charged for breaches to work practices regulations in 2017.
- **Human Rights:** in regards to the adoption of structured policies on compliance with human rights, please see page 41.
- **Business Ethics:** 49% have structured specific business ethics policies, 27% adopted an organisational model pursuant to Italian Legislative Decree 231/2001, 14% is on the list of companies with a legality rating. Only 0.9% had been subject to legal proceedings in the last 5 years for reasons concerning business ethics or administrative liability, pursuant to Italian Legislative Decree 231/2001.

Lastly, 43% of respondents adopt a policy that obligates their suppliers in regards to sustainability.

In regards to supplier top management, within the context of public procedures, the lack of criminal convictions is also verified (by indirectly consulting their criminal record and record of offence related administrative sanctions) which, by nature and severity,

entail the exclusion from contracts and sub-contracts (including offences related to safety, the use of child labour, etc.).

Iren Group has also executed with the Prefectures of Reggio Emilia, Parma, Piacenza and Genoa, legality Protocols that aim to expand monitoring of enterprises in terms of the anti-Mafia protections, even beyond the cases envisaged by law.

Furthermore, certain budgetary indicators are acquired via companies specialising in commercial information (both for corporations and partnerships) which contribute to determining the supplier's score for qualification purposes.

Compliance with the provisions related to the environment from contractors and subcontractors is required in the specifications. Furthermore, in regards to products, the Group promotes the selection of recyclable, renewable materials that minimise waste production and favour production systems with a low environmental impact. Some technical specifications also provide for the purchase of fair trade products. Goods are tracked when the specifications require that they are sourced from a specific location.

### *Through qualification procedures, Iren Group also assesses the social and environmental profiles of suppliers*

The new rules for admission to the Suppliers' Register also provides - related to the suppliers of goods and services with potential environmental impacts (suppliers of environmental services connected to the collection, transport, recovery and disposal of waste; remediation of soil and subsoil, etc.) - for the possibility of carrying out audits to verify compliance with applicable environmental laws, if any, conducted by qualified third parties.

To this end, the following evidence is requested during qualification procedures:

- possession of ISO 14001 Certification (issued by Accredia or by another accreditation body that is a signatory of Mutual Recognition Agreements), or the acquisition of significant interrelated elements of the environmental system;
- possession of EMAS certification;
- possession of an Environmental Product Declaration – EPD;
- possession of energy management systems in compliance with the ISO 50001 standard;
- possession of one or more environmental labels (EU Ecolabel, FSC, PEFC, Plastica Seconda Vita, ANAB – ICEA, Natureplus® Certification, CIC Compostability)
- the use of products from one or more of the labels mentioned above in the production/service process, or of another label that highlights a focus on lowering the environmental impact;
- the use of suppliers holding ISO 14001 and/or EMAS certification in the production/service process;
- the use of work instructions that govern the management of waste, including hazardous waste, packaging and packaging waste in the production/service process, from their temporary storage to their disposal within the contract;





- the use, with reference to the category/categories of products selected, of recycled or recyclable material, with low emissions and low energy consumption;
- the adoption, with reference to the category/categories of products selected, of specific procedures for the storage and collection of recyclable materials in order to guarantee recycling;
- the availability, with reference to the category/categories of products selected, to recover or retain packaging after delivery to be reused and to decommission products to be replaced with proof of their disposal through the recovery of the material.

In 2017, 2,002 suppliers were qualified in total. Of these, 420 demonstrated the possession of at least one of the environmental profiles given above.

Furthermore, additional environmental profiles are assessed via some category-specific questionnaires that require the compliance of the product/service with minimal environmental and rewarding criteria defined by the Ministry of the Environment.

Over the year, around 200 suppliers were selected on the basis of environmental criteria.

Suppliers undergo an evaluation during the qualification procedure and are re-examined after the signing of contracts by the internal departments that manage contracts and directly monitor the conduct of the supplier when carrying out the contracted works. Any continuous negative outcomes or serious failures in executing the work, of which the Procurement, Logistics and Services Department is notified, will lead to the suspension and subsequent exclusion from the Suppliers' Register for a set period.

Membership to the Iren Group Suppliers' Register means beginning a partnership that could, over time, provide for the identification of mandatory qualification profiles, with a view to improving the supply chain that Iren Group intends to use. Being a part of the Register also means sharing the reputational and sustainability values that make up the fundamental elements of Group policy. These commonalities involve the willingness to report on the CSR profiles, with a view to rewarding the willingness shown and subsequently acted on.

## EMPLOYMENT IN SUPPLIER COMPANIES

Iren Group is aware of the important role employment plays in ensuring the social development of the environment in which it operates. It contributes to maintaining employment levels not only through its own employees but also by promoting the development of the Companies to which it commissions services and work, by requesting guarantees from them in terms of both personnel and safety policies through the application of some of its own standards. Moreover, the Group often offers employees of supplier Companies the possibility to use some of the company services and attend training courses organised by the Group itself. Particular attention is paid during the assessment stage of compliance with the regulations relevant to the correct application of

the employment contracts and the payment of the relevant mandatory insurance and social security contributions; the specifications provide for the obligation of the supplier to comply with the laws concerning the protection of the workers and the National Collective Labour Agreements in force and applicable to the sector of reference. These obligations are controlled through the regular acquisition of DURC (statement of correct fulfilment of welfare contribution obligations) and the documents provided by occupational safety legislation (SOP and DUVRI - single document on the assessment of risk from interference). In the case of non-compliance with remuneration and social security contributions, the laws of alternative means are applied, meaning employees and social security funds are paid directly and these amounts are deducted from the amount paid to the contractors. Subcontracts are also authorised and monitored in compliance with the law. In order to participate in the public tenders of Iren Group, companies must comply with the obligations provided by Law 68/1999 concerning the recruitment of disabled people. All the Group's specifications include clauses designed to control the problem of undeclared employment, with regard to tendering and subcontracting. Starting from 2017, during qualification procedures for the Register, and concerning information on operational and organisational capacity, companies are requested to indicate the number of employees on permanent and fixed-term contracts and to specify the ratio of permanent employees to the total number of employees, a ratio that increases the score in a directly proportional manner. In regards to tenders, the contracts of the Group state that the contractor is responsible for complying with current sector legislation. As the contract is characterised by the assumption of the responsibility to achieve a result, the contractor is entrusted to organise the means and workforce needed to attain said result. For this reason, the number of employees hired is not requested. If an obvious anomaly became apparent when verifying the sustainability, the cost of the workforce employed to carry out the tender would also be investigated.



## SUPPLIER HEALTH AND SAFETY

Iren Group considers an investment to dedicate human, professional, organisational, technological and economic resources to occupational health and safety (OHS). In fact, it believes to be fundamentally important to protect workers and includes among its objectives not only compliance with the provisions laid down by specific laws, but also measures taken with a view to continuously improving working conditions. To this end, specific measures to protect health, safety and hygiene at work are also required by

tender contracts. During the supplier evaluation phase, information on accidents that the company has recorded in the last three years is requested via the general questionnaire on the Procurement Portal. In addition to the CSR survey conducted on suppliers (see the box on page 109), it emerged that, in relation to the activities carried out for Iren Group, in 2017 only 2% of suppliers had instances of accidents and only 3% had cases of illness. During qualification procedures for the Register, suppliers are investigated also on the following aspects:

- the existence of a Prevention and Protection Service, either within or outside of the company;
- the appointment of a Safety Contact that deals with individual contracts/orders;
- whether it has benefited from an INAIL tax reduction (ref. MOD OT24) at least once in the last three years;
- the existence of an Occupational Health and Safety Management system (OHSM) certified in accordance with article 30 of Italian Legislative Decree 81/08 and, if so, it is requested to specify if it complies with the UNI-INAIL guidelines or the OHSAS 18001 standard;
- systematic verification of the level of learning reached by each worker after every training event;
- the integration of Italian language courses within foreign workers' training.

Furthermore, with reference to the personnel of third-party companies operating on construction sites and plants, the Group carries out monitoring and control inspections on the activity carried out, related to aspects of safety and hygiene at work. Monitoring of the activities is guaranteed by internal supervisory inspections by the Works Management (contracts pursuant to article 26 of Italian Legislative Decree 81/2008) or by the Coordinator during the execution phase (on temporary and mobile construction sites pursuant to Title IV of Italian Legislative Decree 81/2008). For auditing contracted companies, the activities dealt with by the technical departments were identified and integrated into the relative procedures and/or defined as general procedures.

## TRAINING AND INFORMATION

During 2017, at a Group level a total of 2,380 hours of training/information activities were provided, not exclusively related to occupational health and safety, with the involvement of 359 members of staff from third-party companies. In regards to occupational health and safety initiatives, comprehensive information has been given on the working environments (for example, jobs in confined spaces) and on the emergency and prevention measures adopted.

## SUPPLIER PORTFOLIO AND PURCHASE VOLUMES

In 2017, purchase orders were issued to 3,573 suppliers for over 677 million Euro.

## IMPACTS ON THE LOCAL AREA

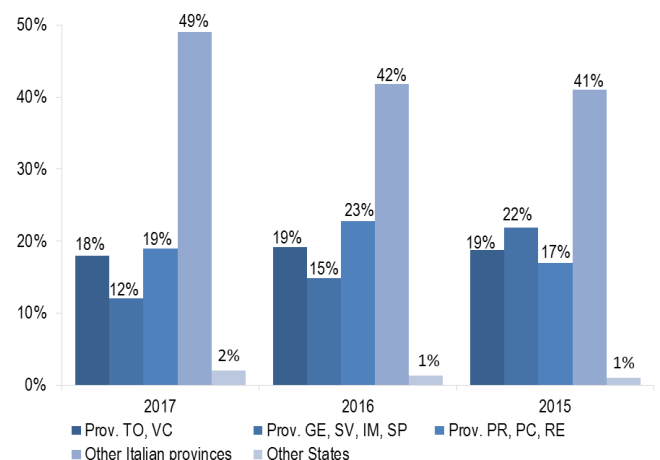
Sourcing of suppliers in the local areas of reference is extremely well-established, both in terms of the number of active suppliers (49%) and the economic value of the orders, amounting to 44% overall. This data highlights the importance of the effects of Iren Group on the territorial areas of reference.

Within the context of public tender procedures, in compliance with current legislation and Community principles, marked by the criterion of free movement of goods and people, which requires that all companies can compete, no matter their location, the Group does not select suppliers by geographic origin, but on quality and economic criteria, favouring the best value for money as the determining criterion. In order to guarantee an adequate level of competition, where feasible, it arranges the tender into functional lots, so as to allow separate awards and greater participation by economic operators, including those that are small and medium enterprises. In regards to the excluded instrumental tenders, which are carried out via invitation, or irrelevant to the Contracts and Concessions Law, Iren Group reserves a 50% share for local economic operators with suitable qualifications that are present in the Register when identifying the panel of qualified suppliers to invite to the tender. This measure aims to favour local development and, consequently, social cohesion.

The economic impacts on local business generally occur due to subcontracting to local companies - within the limits allowed by law - that are able to work on a portion of the activities and apply more competitive prices given that they are already present in loco and guarantee efficient services due to their knowledge of the area.

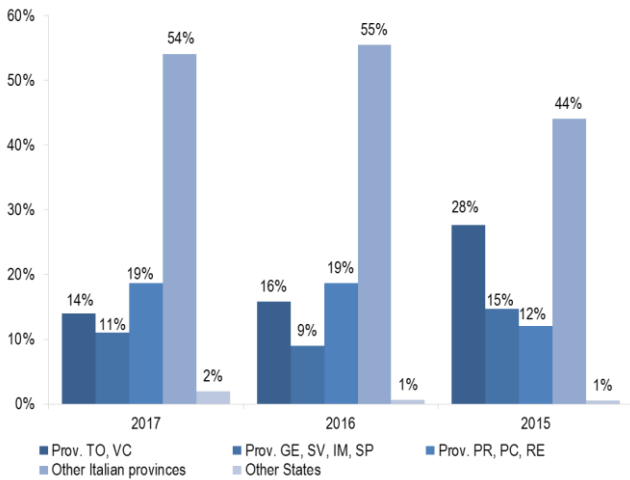
In relation to the large number of suppliers by geographical area and the relevant volumes ordered, the composition is represented below and refers to all purchases with exclusion of contracts for the supply of raw materials.

SUPPLIERS PER GEOGRAPHIC AREA (% OF NUMBER)





## SUPPLIERS PER GEOGRAPHIC AREA (% OF EURO)



Within the general qualification questionnaire, suppliers are asked if the company's main purpose is the social and professional integration of disadvantaged people or those with disabilities (as defined in Article 4, subsection 1, Law 381/1999 "Social Cooperatives Regulation").

32 social cooperatives are present on the Procurement Portal as qualified suppliers, amounting to 1.6% of all qualified suppliers. Of these, 28 have worked with Group companies in 2017.

The overall order amount to social cooperatives was over 60 million Euro, representing 9% of the total value of Group orders.

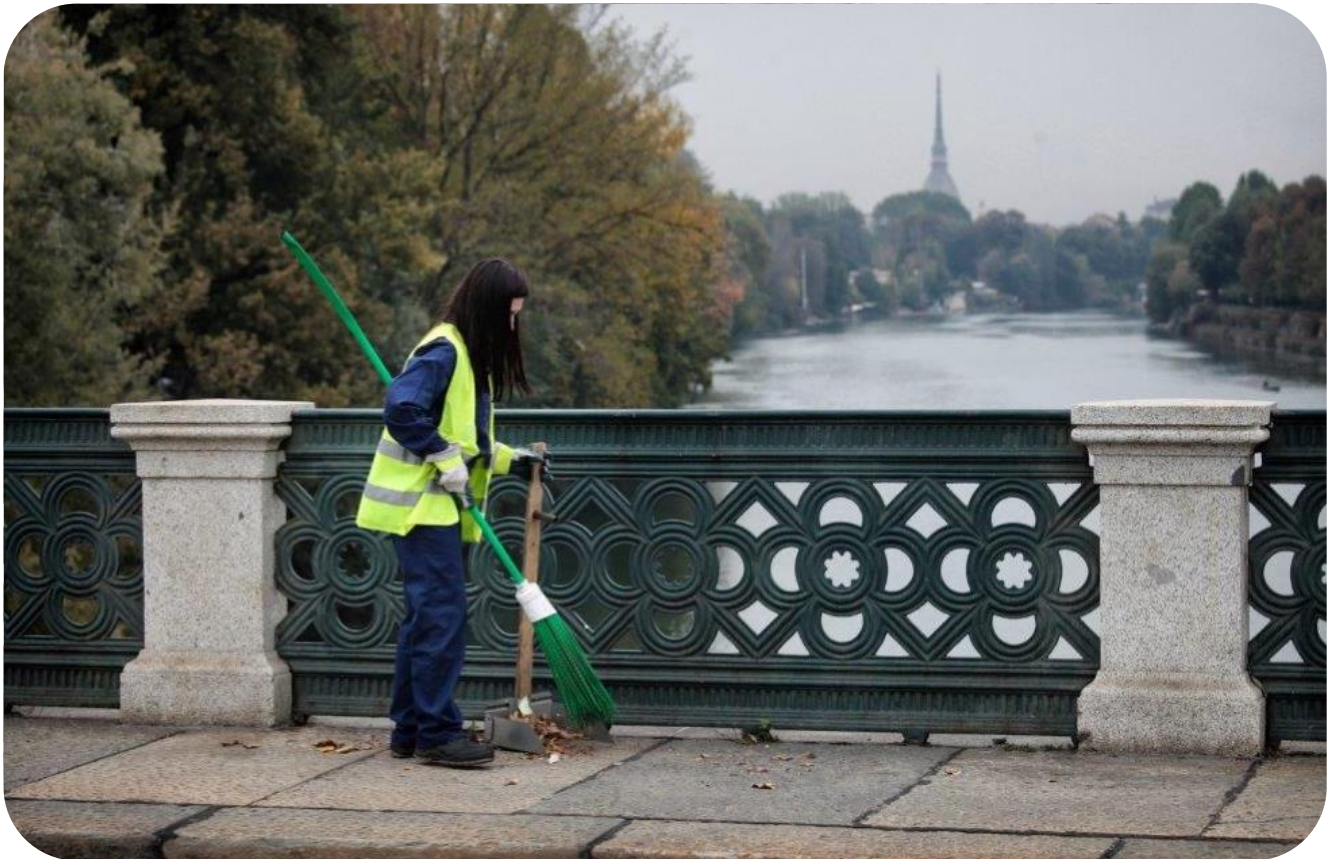
Social cooperatives	2017	2016	2015
Suppliers (no.)	28	35	34
Orders (Euro)	60,520,587	41,653,283	51,013,927

## SOCIAL COOPERATIVES

The Group supports social cooperatives that place the incorporation of disadvantaged people within the world of work as their main task. These enterprises work in waste collection and environmental health services in particular.

## DISPUTES

In 2017, the Group definitively lost three cases against suppliers, without economic consequences.





# Community and local area



## IMPORTANT TOPICS



Development of local communities



Emergency management



Construction sites management



Internal and external communication





## FOCUS ON COMMUNITIES AND THE LOCAL AREA

The great importance that local communities hold for Iren Group is also highlighted in the 2022 Business Plan, which establishes sustainable development among its strategic guidelines. Indeed, the Group is committed to promoting a new model of territorial development concentrated on process and product innovation, as well as on social innovation.

A significant portion of the investments outlined in the Business Plan is intended for the development of the local areas in the provinces of Reggio Emilia, Parma, Piacenza, Genoa and Turin, generating a significant boost in the growth of local economies with positive impacts in social, economic and environmental terms.

Furthermore, around 50% of investments envisaged in the Plan are for environmental sustainability initiatives.

All of the activities are planned and carried out with awareness of the corporate responsibility that Iren Group has towards the local communities and areas, with the aim of producing value while protecting the environment and respecting the expectations of the stakeholders.

From the various actions that aim to generate positive impacts on the local area, the Local Committees are of note.

### IREN LOCAL COMMITTEES

Iren Local Committees are bodies which have been established to strengthen relationships with the local areas, analyse them and anticipate needs, encourage innovative environmental and social initiatives, increase widespread awareness of strategies and services offered, guaranteeing broad representation of the various realities of civil society and engaging Iren Group top management in dialogue with its stakeholders. Committees are also a work instrument for collecting the ideas and proposals of citizens via the *Irencollabora.it* platform, in order to plan new sustainable development solutions, enhancing the experience, knowledge and skills of local communities to create shared value and generate growth for the Group and for the areas in which it operates.

The Committees are made up of 15/18 members, the representatives of Local Bodies and Associations, who offer voluntary and free participation. In addition to the above, there are 5 ex-officio members: a representative of the Municipal capital; a representative of the provincial Municipalities; a representative of the local University; Iren Chairperson and Deputy Chairperson.

Working groups are established within each Committee that follow the activities for the best implementation of the individual projects proposed by the same members of the Committees or by citizens registered via the on-line platform *IrenCollabora.it*, the first example on a national level of a participatory planning platform, where citizens can make proposals and suggestions directly on the issues dealt with by the Committees, with the aim of generating concrete and tangible projects.

In 2017, the projects incubated by the Committees of Piacenza, Parma, Reggio Emilia, Turin and Genoa almost doubled compared to 2016, reaching 40, and concerned environmental, social and educational topics.

16 new projects, which join the 9 from the 2015-2016 two-year period, were implemented in 2017, while others are in the development stage.

### PROJECTS CREATED IN 2017

**Pro Ultra 70.** Proposed to the Parma Committee by Italia Nostra, the project develops actions and tools to facilitate contact between citizens and the company, also by way of targeted analysis of the needs expressed by disadvantaged groups, the over-70s in particular. To this end, a focus group was created that led to the participatory drafting of a bill reading guide, available at all Iren Group service desks in Emilia and at the offices of the consumer associations in the province of Parma. The "Bolletta facile" guide contains explanations of the main data on the gas and electricity bills. Furthermore, the methods for submitting self-reads of meters and paying bills were also illustrated.



**Cibo per tutti: (Food for All: to the solidarity store in Reggio Emilia).** The DarVoce association proposed a project to the Iren Committee in Reggio Emilia to create a neighbourhood store that will intercept food and basic necessities producers, especially local ones, within a rationale of territorial subsidiarity. The store opened in 2017 to support 50 families, selected by the Municipality of Reggio Emilia together with Caritas and local voluntary associations. The store is also a place where people make themselves available to others, by donating time, skills, food, money or voluntary activities to be carried out in the building or within the local area associations. Through various events, organised thanks to the help of 70 volunteers from the Dora association, 1,200 have been reached. 56 partner companies were involved over the year and allow the store to gather over 26,000 products, as well as seasonal fruit and vegetables donated every week. Thanks to awareness raising activities in five schools in the province of Reggio Emilia, 2,500 students were able to learn more about volunteering.

**CeloCelo.** This project, proposed by the Non-Profit Agency for Local Development of San Salvario to the Turin Committee, aims to put in contact people working in the social sector with those who have something to donate, to create and trial a system of procurement and distribution based on a local network of non-profit organisations and on an online platform ([www.celocelo.it](http://www.celocelo.it))

that brings together supply and demand of goods and services. The direct beneficiaries of the donations provided by CeloCelo are disadvantaged people and families, which have been identified by organisations that work in the social welfare field. The support of the Turin Local Committee allows the logistics system to be made more efficient and to develop communication to raise awareness of opportunities for the reuse of goods for cooperative purposes that are offered by CeloCelo.

**Sapere è vivere. (Knowledge is Life. Get to know cancer so you can prevent and beat it).** This project focuses on the production of an informational “Notebook” for the Piacenza community, and young people, their families and teachers in particular, with the aim of raising awareness about cancerous disease, quality of life and social well-being. The Notebook is designed to promote the culture of knowledge to encourage the public, and young people in particular, to get to know the values of science and research. The Piacenza Committee has collaborated in the promotion and dissemination of the Notebook to ensure the most widespread circulation, through the network of Bodies and Associations that participate in the Committee.

**Bonus sociali**  
La bolletta della luce e del gas può essere più leggera.

Un aiuto da 140 a 430 Euro all'anno!\* bolletta

**Energy bonus.** The Consumer Associations present in the Iren Local Committees for Genoa highlighted the emergency of families in financial difficulty in relation to their energy bills. The Genoa Committee identified the first aspect on which to intervene quickly: the diffusion of information concerning social electricity and gas bonuses. In 2017, specific information material was produced and distributed to a network of over 70 information points, including Tax Assistance Centres (CAF) and citizen's counters. The project will continue in 2018 with a training campaign for the associations of the interested areas.

**Voluntary mutual fund for energy poverty.** The project was proposed by the Consumer associations of the Committees of Piacenza, Parma and Reggio Emilia, aiming to identify forms of support for families experiencing financial hardship in paying their energy bills. In 2017, solutions were identified for the

communication and diffusion of the “Gas bonus” and “Electricity bonus” of ARERA (formerly AEEGSI), which are under-used by the potential eligible beneficiaries. Three training meetings were organised for the local Municipalities, Bodies and Associations in order to create a network to increase knowledge about these instruments. The project will continue in 2018 with an information campaign for all citizens in the three Emilia provinces.



**Parma non spreca (Parma doesn't waste).** The project was created to meet the increasing requests for help from families in financial difficulty in Parma and the province and extended the donor network to the collection of fresh and cooked food, in addition to packaged food products, to distribute to Stores and Associations that support people in hardship. The project, presented by the Kuminda Association and coordinated by the Parma Solidarity Forum, also represents a tool for reducing waste and refuse. 2017 was characterised by three important new developments: the collaboration with different bakeries that allowed increased demand to be met, the weekly donation of carrots by a company in Parma and the signing of an agreement to collect uneaten meals from a company cafeteria.

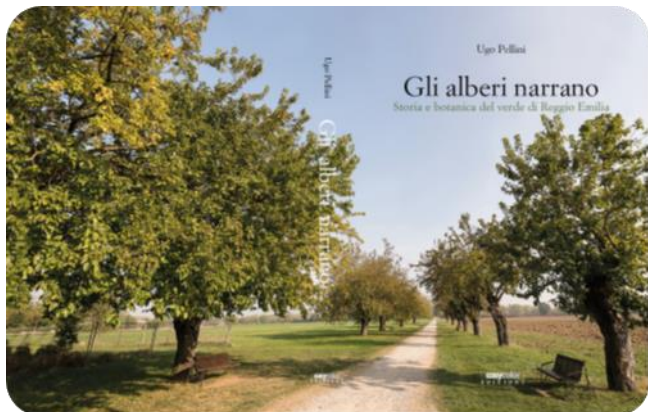
**Campioni si diventa. (Champions are Made).** The project, proposed on IrenCollabora.it by the 108IA2 Lions District in Genoa, provides sports practise for 100 children aged between 10 and 16 every year, who, due to the economic hardship of their families, are not able play sports. The Social Services of the Municipality of Genoa identify the families and children to support. The Italian National Olympic Committee (CONI) works with local sports association to allow sports to be practised for free. The Lions District, in addition to coordination, also acquires the necessary medical certifications, organises meetings in schools and sources any sports clothing and equipment. The Genoa Local Committee has made available the resources for insurance and part of the equipment necessary for the young people to practise sports.

**“Slow Food Piacenza” Orto della Condotta School Garden.** This three-year project, which begun during the 2016/2017 school year from the collaboration between Slow Food and the Iren Local Committee of Piacenza, involved six primary school classes and ten sections of the nursery of the eighth teaching circle of Piacenza. The 41 teachers involved in the project attended a training course certified by the Ministry of University and Research (MIUR). The experience was developed on the preparation of the garden and sensory education. Furthermore, through the





educational activity of Edu.Iren “Sono Eco, Se Non Spreco!” (I’m Eco, Otherwise I Waste!), classroom meetings were held to raise the children’s awareness on proper waste management. The project will continue over the next two years.



**The green history of Reggio Emilia.** The project, proposed by the Committee of Reggio Emilia, enhances the green resources of the City, reconstructing its history and evolution over time. The topic of sustainability is dealt with by starting from the city trees that are at the centre of the publication, curated by the expert botanist Ugo Pellini, which has become a tool to promote and support the development and enhancement of the local area, as well as a work tool for teachers and students. The project is complemented by a training proposal included in the 2017/2018 Edu.Iren catalogue for primary schools in Reggio Emilia.

**Ri-Cibiamo al Ristorante - Chi ama il cibo non lo spreca (Re-Eat at the Restaurant - People who love food don’t waste it).**

The project, proposed by the PiaceCiboSano Association and developed within a collaboration of the Local Committees of Parma and Piacenza, investigated and analysed the topic of food waste in catering, proposing simple and effective solutions to reduce the problem. During 2017, 60 restaurants in Parma and Piacenza joined the project and were involved in waste monitoring and to whom informational material was distributed. A “family bag” kit was also made that restaurants use to give their customers the food they have not eaten at the restaurant. The project saw the involvement of the students of the Hotelier Institutes of Piacenza and Salsomaggiore, which, as part of the combined school and work model, collaborated with restaurants to reduce waste. Ri-Cibiamo was also awarded during the third edition of the ER.Rsi Innovatori Responsabili (Responsible Innovators) award of the Emilia-Romagna Region, dedicated to the best initiatives that combine ethical values and sustainability.

**Atelier per una sostenibilità in cucina (Atelier for sustainability in the kitchen).** The project has created an experience around the idea of “sustainable cooking”, involving the Magnaghi Hotelier Institute in Salsomaggiore which, together with Reggio Children, Edu.Iren and the Parma Committee, defined the plan of educational activities for the 2016/2017 school year and trained its students to become trainers in the management of ateliers aimed at primary schools. A training meeting was held at the Loris Malaguzzi International Centre (Reggio Emilia) for all fourth and fifth years of the Hotelier Institute and six ateliers with

the primary schools in the province of Parma. Every Atelier saw the participation of Edulren representatives, teachers of cooking and food science from the Hotelier Institute, pedagogues and atelieristas from Reggio Children. Overall, 220 children from primary schools and 100 students from the Magnaghi Institute were involved and 50 hours of cooking practice were given.



**Environmental development of pruned urban vegetation.** The aim of the project, presented to the Local Committee by the University of Parma, involves uniting environmental protection with the rational use of resources and materials that are normally considered waste, in order to contribute to sustainable development. The project makes use of pruned urban vegetation thanks to technology that allows the lignocellulosic component from urban vegetation residues to be converted to a renewable combustible gas and carbonic material (biochar) that acts as a soil improver. The development of this project entails an initial trial phase, followed by reporting, scientific dissemination, promotion and information to all citizens in order to see the project implemented on a wider scale.

**Reuse centres.** The project is promoted by the Local Committees of Piacenza, Parma and Reggio Emilia to create centres, also in terms of design, that make effective reuse of discarded items and materials, preventing them from becoming waste. The project, which was the subject of a study conducted in collaboration with university research centres, has proposed an innovative approach based on five fundamental aspects:

- operational versatility that incorporates: repair, renovation, modification, the sale of goods, with the supply of correlated services (e.g. local uplifts), activities to promote a culture of sustainability;
- the inclusion of disadvantaged people in the workplace and the creation of opportunities for youth entrepreneurship;
- the use of technologies that enable the dynamic management and use of the entire range of services and products;
- recovery of public spaces, contributing also to the redevelopment of urban areas;
- the creation of a network that can allow the individual Centres to develop specific vocations, also in relation to their territorial characteristics.

In 2017, the project was presented at the Horizon 2020 programme and the ATERSIR programme that saw the rewarding of an economic contribution for the Reuse Centres of Reggio Emilia and Piacenza: the first – called “La Polveriera” – was launched and is

available to all citizens, while the management and implementation plan was drafted for the reuse centre for Piacenza.

**Parco Antola - Un lago da bere (A lake to be drunk).** On the IrenCollabora.it platform, a project was proposed to make better use of Antola Park and improve the environmental development and its positioning within the regional tourist offer. In 2017, maintenance and improvement works were carried out on the Brugneto Dam, inside the Park, and a low-emission engine was purchased for a boat intended to clean and collect waste on the surface of the lake.



**What Weee Are.** The project, proposed by Alessio De Marchi, aimed to spread awareness on the content of WEEE electronic devices, promote channels for material recovery and make people aware of the proper disposal of dangerous components. The activity was divided across four theoretical and practical meetings with students from two classes of the Cottini State Art School in Turin, which included: the proper disposal of various types of waste, via Iren's Mobile Environmental Centre (CAM), the metals contained within the WEEE, the dismantling of some items for dividing the material components and the creative reuse of materials recovered by the WEEE.

**Raising awareness about throwing cigarette ends on the ground.** Presented to the Parma Committee by Adoc, the project intervenes on the problem of cigarette ends tossed in city streets and their consequent decay and pollution. Iren intervened with a more widespread and exact distribution of suitable street ashtrays, in the city centre in particular, accompanied by a special awareness-raising campaign aimed at the local community.

**Arturo - I tuoi occhi sulla valle (Your eyes on the valley).** Climate change is producing phenomena of intense rainfall that produce high risks of flooding. The project, presented to the Committee of Piacenza by the Municipality of Rottofreno, resulted in the construction of warning instruments, addressed to the parties appointed to manage emergency situations in particular. Winner of the Smau 2016 innovation award, "Arturo" was officially presented in Amsterdam in December 2016 and in Paris, San Nicolò di Rottofreno and Piacenza in 2017. The European project CAPLO, of which "Arturo" is part, was promoted by five international research partners that analysed the flood prevention and management capacities of five river basins (Val Trebbia – Italy; Siene – France; Ebro – Spain; Danube – Germany; Meuse – Holland) with the aim of improving the resilience of local communities. The construction system of the warning instruments created by "Arturo" have also become a case study of the Level 2

Master for Public Administration Innovation and Management at the Catholic University of Milan.

## PROJECTS IN DEVELOPMENT IN 2017

**Signs for children for the historical aqueduct in Genoa.** The project proposes to create an itinerary for children for a stretch of the path of the historic Aqueduct of Genoa, by embarking on participatory planning that sees the children as the protagonists, with a sign designed and dedicated to the kids. The project entails the creation of a network of subjects within the Local Committee of Genoa which will collaborate in its creation, making specific skills available.

**#iorestaurocongenovacultura (irestorewithgenoaculture).** The renovation of the Barchile fountain in Piazza delle Erbe in Genoa was the first chapter of the #iorestaurocongenovacultura project that entailed the identification of monuments to restore, respecting the historical and artistic situation of the place and its evolution over time, through a conservative approach with non-invasive works. Once the necessary funds have been collected to restore the Barchile, the project envisages circumscribing and illuminating the aforementioned monument. The Genoa Committee is preparing a call to competition aimed at students within the Architecture Faculty entailing the submission of a project to create the artistic lighting.



**Ecological environmental centre.** The project proposes the reopening of vacant activities with new green orientated activities in Borgo Campidoglio, through the creation of an ecological and natural shopping centre to be constructed in a district known for its craftsmanship and currently chosen as the district for Smart City experimentation in Turin.

**#conosceregestireilterritorio (knowtomanagethearea). The UNESCO MAB Reserves: platform for the sustainable development of communities.** The project was established due to the public's lack of knowledge about the value of the landscape, local and ecological heritage, against which the aim is to promote actions to bring people closer and raise awareness that encourages the development of knowledge of residents in the area of MaBCollinaPo (Turin). Through the creation of collective workshops in which sustainability policies can be implemented, involving communities, the aim is to conserve landscapes and ecosystems, allow sustainable social and economic development and support research, training and environmental education activities.





**Lungomare Lombardo (Lombardo Waterfront).** The Lombardo waterfront is an area of Genoa that is underutilised by Iren, which includes a building and small outdoor area. The proposal was made to the Local Committee of Genoa in order to make the area available to the Italian Rescue Association as a multifunctional, educational space, as well as a first aid station for the benefit of public assistance. In 2017, an application was submitted to the Municipality of Genoa to extend the state maritime concession and the collection stage for the funds needed to redevelop the area was begun.

**Good practice manuals in several languages.** Environmental protection and the promotion of conscious resource management form the basis of this project, presented by Chance Eventi-SUQ Genoa, to inform and raise the awareness of the public in relation to daily good practices and responsible conduct. The project, which is to be presented for the 20° Suq Festival – EcoSuq, aims to be a quick and educational manual, translated in English and Spanish, that can also be accessed by the main foreign communities and new citizens who live in Genoa. Practical advice and suggestions able to educate people about a sustainable future and reduce the environmental impact of everyday life.

**Education – Raising awareness on energy saving.** This is an invitation to think about energy and energy saving, starting in schools and families, engaging students in the province of Reggio Emilia. The Cremit Institute of the Catholic University of Piacenza was involved in creating a dedicated portal for teachers and students in primary and secondary schools on topics concerning energy education.

**Water: eco-museum of Noasca.** The project, which aims to enhance the tourist offer of the Municipality of Noasca (Turin), is divided into two areas: the creation of an outdoor eco-museum on the topic of “water” in all its forms, and the lighting of the cave path and the waterfall in Noaschetta.

**The Staglieno factory.** The monumental cemetery of Staglieno (Genoa), defined by E. Hemingway as “One of the Wonders of the World”, contains thousands of fine works of art that are often in states of substantial degradation. A project to restore the cemetery, and some of the works it contains, to their original splendour was proposed to the Local Committee of Genoa, also through the re-evaluation of the work of craftsmen, restorers and marble workers, in order to enhance its role as a tourist attraction for the city.

**Reland. Land of reuse and self-sufficiency experimentation.** The project was presented to the Committee of Turin by Off Grid Italia, an association for the promotion of low environmental impact living practices. It proposes to build a network dedicated to reuse, via a technological platform that will manage the subjects, materials, techniques, methods for the recovery of items and water, applying the philosophy of reuse and self-sufficiency in an experimental park focused on resilience. The aim is to transform waste from a problem to a circular resource.

**Ecofeste.** Legambiente Piacenza has been developing a project to reduce waste produced by parties, local festivals and summer camps for many years now, based on replacing disposable dishes with a reusable material that can be washed in a dishwasher. The goal is to reinforce the organisation of the project, increase the

number of people involved and make it more popular and widespread, also with the help of an incentive system that is to be implemented with the involvement of the Municipalities in the province.

**Energie sociali (Social Energies).** The ARCI Genoa association proposes to offer social entities (starting with voluntary and social advancement associations) a series of useful services to qualify their energy consumption, to improve the energy performance and use clean energy. Iren has prepared a questionnaire for the ARCI locations in Genoa in order to conduct a preliminary audit that verifies what interventions are possible to make the buildings more efficient from an energetic perspective.

#### OTHER INITIATIVES OF LOCAL COMMITTEES

**Shape Energy Seminar.** The Shape Energy Seminar was held on 1 December 2017, created out of the collaboration between the Polytechnic and the Iren Local Committee of Turin. The participants, encouraged by innovative technologies, are focused on the challenges of the decentralisation of the production and distribution of energy from renewable sources in the metropolitan area of Turin, on a 10/20 time-frame. The seminar was one of 18 that Shape Energy organises and facilitates in 18 European cities to foster collaboration and dialogue with local stakeholders on issues concerning energy transition. The results of the seminars will be disseminated locally and within the European Union (DG Energy Research & Innovation) to define the future policy and research policies.

**AmbientAzioni call for ideas.** The Competition, promoted by the Local Committee of Piacenza and aimed at local citizens and students, intends to select projects on saving energy and water resources and the reduction of waste production. The 2017 edition was aimed at designing instruments, actions and initiatives to raise awareness and educate on the saving of resources to monitor energy and water consumption and the production of waste and to improve water, environmental and energy performance within small communities. Participants were asked to submit innovative projects that could be replicated in other contexts, with a budget of maximum € 30,000 and with demonstrable economic and social benefits for the community. From the projects submitted to the competition in 2017, “Studia, smonta, aggiusta, ricicla, differenzia” (Study, dismantle, repair, recycle, differentiate) was chosen, which creates a service centre for the repair of small electronic-electric devices at the “Mattei” Higher Education Institute of Fiorenzuola, combining the logic of reusing goods removed from the waste circuit for solidarity means, with the social aspect of the combined school/work projects.



Once again in 2017, Iren Local Committees were the sites of analysis and dialogue between Iren Group and the stakeholders on: the 2016 Sustainability Report, the 2016 customer Satisfaction survey, the update of the 2022 Iren Business Plan and the assessment of relevant topics to conduct materiality analysis for the preparation of the 2017 Sustainability Report.

In 2017, Iren created or contributed to the creation of some important environmental, social and cultural projects, which had significant importance in the local area in which they were implemented.

## PROJECTS FOR THE LOCAL AREAS

Areas	Projects
Environmental	<ul style="list-style-type: none"> <li>• <b>Ecofan per natura (Ecofan for Nature).</b> The campaign was launched via the <a href="http://www.ecofan.org">www.ecofan.org</a> website and the participation in various local events, with the aim of raising the awareness of the event organisers and participants regarding conscious conduct, through games, competitions and the provision of services. Ecofan favours and promotes the development of a sustainable society by application principles geared towards the saving, reuse and recycling of resources. Iren has participated with this project at: the Gola Festival in Parma, Dinamico Festival in Reggio Emilia, Maratona in Turin, Science Festival in Genoa, as well as the evening events of the main Theatres of which Iren is a Founding Partner.</li> <li>• <b>Awareness raising campaigns for separated waste collection.</b> Iren has created special campaigns, using different tools (bill posting, posters, buses, internet, social networks, etc.) in Turin, Vercelli and Reggio Emilia. In Parma, the focus was on raising awareness against “incorrect disposal”, also in collaboration with condominium administrators.</li> <li>• <b>Collection points.</b> Communication initiatives have been carried out on new IT services of collection points to encourage their use and reduce incorrect disposals in the Parma (Parma and Fornovo) and Reggio areas (Albinea, Casalgrande, Castelnuovo Sotto, San Polo, Rio Saliceto and Scandiano).</li> <li>• <b>Ecostar.</b> Collaboration to create an informative video campaign in the Municipality of Cadelbosco to maintain close attention to correct separated waste collection.</li> <li>• <b>Capitan Acciaio (Captain Steel).</b> In September, in collaboration with the Ricrea consortium, initiatives aimed at raising awareness on the collection and reuse of steel were implemented in Parma and Piacenza with Iren being awarded as service operator.</li> <li>• <b>Public Water Dispensers.</b> In Parma, Iren has created a campaign in the local press and at water dispensers, during which cards were distributed to citizens to raise awareness concerning the use of the Public Water dispensers that allow for a substantial reduction in plastic bottles.</li> <li>• <b>Original music at Brugneto Lake.</b> A concert on the banks of Brugneto Lake, one of the biggest water reserves in the Liguria region, was used to promote eco-sustainable tourism, enhance water resources and make the public aware of one of the most important plants Iren manages.</li> <li>• <b>World Water Day.</b> On 22 March, Iren took part in “World Water Day”, an opportunity to provide indications and advice against waste and behaviour to implement in order to protect this precious asset. In Genoa, Parma, Piacenza and Reggio Emilia, citizens were invited to take part in a the “Mettici la faccia” (Put a face to it) photography contest: a photo with a funny cardboard cut-out on the topic of water, posted on Facebook or Instagram with the hashtag #ecofanpernatura.</li> </ul>
Social	<ul style="list-style-type: none"> <li>• <b>Prisons in Parma and Reggio Emilia.</b> Awareness-raising and information activities on separated waste collection for prisoners incarcerated in the correctional facilities of Parma and Reggio Emilia with the ideation, creation and supply of communication materials paired with separated containers.</li> <li>• <b>Santa Claus with FORMA.</b> Iren supported the customary Christmas event that saw the participation of thousands of people dressed as Santa Clause, promoted by FORMA, the Foundation of “Regina Margherita” Hospital in Turin, in front of the Children’s Hospital with a donation and environmental services. It also promoted the initiatives amongst employees that purchased Santa Claus costumes, gathering funds to donate to the Regina Margherita Hospital.</li> <li>• <b>Just the woman I am.</b> Iren collaborated in the creation of the event by supplying electricity and taking part with its employees in the race, organised by CUS Torino for International Women’s Day, aimed at gathering funds for university cancer research. The Iren team was one of the largest with 100 runners.</li> </ul>



Areas	Projects
<b>Cultural</b>	<ul style="list-style-type: none"> <li>• <b>Archive Project.</b> The Group has launched a project to preserve and enhance the company's heritage, the history of the various companies and their close link with the area. As the first event, Iren participated in "La Notte degli archivi" (Archive Night), opening some plants to the public (in Turin, in Valle Orco and in Val Susa) for a recital on the history of Iren held by the writer Giuseppe Culicchia.</li> <li>• <b>National Innovation Award.</b> Iren supported the 2017 PNI in the belief that the development and growth of its business can draw inspiration from dialogue and collaboration with innovative, ambitious start-ups supported by solid entrepreneurial projects. The Group also supported the regional "Start Cups" in Emilia Romagna and Liguria.</li> <li>• <b>Iren Start Up Award.</b> In 2017, the first edition of the contest promoted by Iren to select the best Italian and international start-ups was held in view of future collaborations.</li> <li>• <b>Sunday Painters.</b> Iren supported the talent context dedicated to amateur painters who, within the framework of Artissima Torino, took on the topic of "light".</li> <li>• <b>Photomathon.</b> Iren promoted Photomathon in Genoa, Piacenza and Turin, proposing subjects for the competition's topics that are dear to the respective cities: water for Genoa, sustainability for Turin and district heating for Piacenza.</li> <li>• <b>Iren mecenate (Iren sponsor).</b> Iren Group promotes the cultural values and the importance that these have in the development of local areas. That is why Iren has been a Founding partner of the Royal Theatre Foundation in Turin, the Theatres Foundation in Reggio Emilia, the Carlo Felice Theatre in Genoa and the Theatres Foundation in Piacenza. It has also always supported the Royal Theatre in Parma.</li> <li>• <b>Guercino in Piacenza.</b> Iren supported the event that, in addition to the exhibition at Palazzo Farnese, allowed important and permanent enhancement works of the city's Duomo to be completed, obtaining extraordinary success with the public (over 100,000 visitors).</li> </ul>

## GIFTS, DONATIONS AND SPONSORSHIPS

Iren Group focuses heavily on cultural, environmental and sports events that possess distinctive characteristics at a national and international level and which are rooted in the local tradition of the areas of reference. In 2017, Iren provided 194 sponsorships and 49 donations, amounting to around 8 million Euro in total.

### In regard to donations:

- 20 were cultural and innovation initiatives (88.6%), including support for the Royal Theatre in Parma and membership to the Theatres Foundation of Reggio Emilia, the Royal Theatre Foundation of Turin, the Theatres Foundation of Piacenza and the Carlo Felice Foundation in Genoa;
- 10 in the social field (5.0%), including support for University Scholarships and the Peri Institute of Reggio Emilia;
- 10 in the environmental sector (1.8%), including Membership to the Environmental Ethics Centre and support for the environmental projects of numerous Emilia Municipalities;
- 3 in the sports field (3.0%), including support for the European Paralympic Youth Games that were held in Genoa;
- 6 entertainment projects in the local area (1.6%).

### The 194 sponsorships were divided as follows:

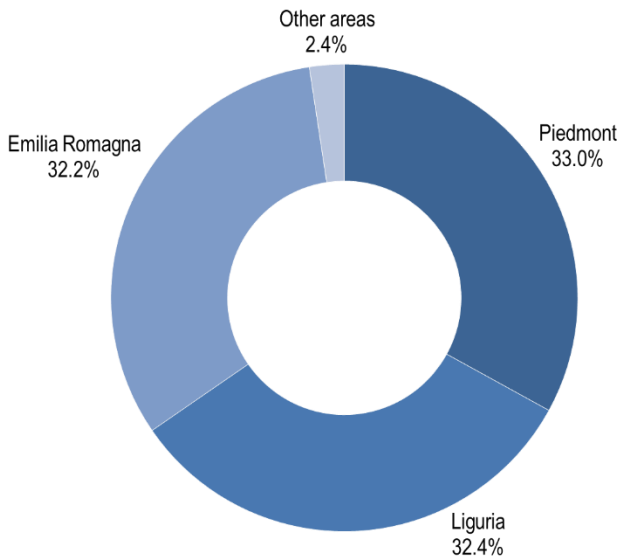
- 34 were cultural and innovation initiatives (32.9%), including the National Innovation Award, the Emilia Romagna Start Cup and the Liguria Start Cup, the Science Festival in Genoa, the European Photography event in Reggio Emilia and the Festival Verdi in Parma;

- 49 in the environmental sector (9.5%), in support of various projects presented by the Municipalities in the Emilia Romagna region, of the Remida Centre in Reggio Emilia and CinemAmbiente in Turin;
- 30 in the sports sector (3.3%), including support for the season some minor sports teams, such as hockey, sledge hockey, basketball and water polo;
- 17 in the social sector (5.1%), amongst which we should note the Piazza dei Mestieri Foundation, which promotes professional training for teenagers, and the projection on some monuments of the symbol of the Erasmus logo for Europe Day;
- 64 entertainment projects in the local area (49.2%), including Christmas events in Turin (Luci d'Artista), Genoa (tree at Porto Antico), Reggio Emilia (Santa Claus' House) and New Year in the square in Reggio Emilia and Parma.





## DONATIONS AND SPONSORSHIPS PER AREA



## REDUCTION OF IMPACTS ON THE LOCAL AREA AND COMMUNITIES

Developing together with local communities is part of the strategy of Iren Group which places the focus for shared economic and social development in the local areas of reference. Group activities are planned and carried out with an awareness of corporate responsibility towards the communities and local areas. The Group adopts specific procedures for the prompt and effective communication in the event of faults, service interruptions and inconveniences caused to residents within the times provided by sector legislation. For activities within the electricity, gas, water and district heating sectors, the Group also complies with the guidelines specified by ARERA (formerly AEEGSI). In addition to managing compliance with legislation, Iren Group has developed voluntary codes and regulations (internal requirements and procedures) and adopted initiatives that mitigate impacts on the health and safety of the public arising from the activities carried out.

The main activities of the Group that impact the community and local area are:

- production of electrical and thermal energy.** Iren actively strives to develop renewable and other similar energy sources. The management of production activities of the thermal energy, thermoelectric and waste-to-energy plants are described in internal procedures and conducted in compliance with the requirement of the Law. Emissions are constantly monitored and controlled. Investments are being made constantly to optimise the energy efficiency of plants. Energy production plants are all equipped with control protocols, both in compliance with environmental legislation (ISO, EMAS), as well as in accordance with the provisions of Control Authorities. Iren also intends to further extend its district heating system to reach around 100 million cubic metres of volume heated by 2022. In relation to the

construction of new plants, all construction and management phases are evaluated, with particular attention dedicated to assessing the impacts generated by the presence of construction sites. Audits are carried out on the work of the businesses' personnel for all contracted activities in compliance with the directives adopted in the context of the Integrated System (Environment, Safety, Quality);



- waste collection and management.** Iren manages waste across all stages: collection, selection, transport, treatment and disposal, contributing to the recovery of material and energy production resulting from these resources, thus reducing the use of non-renewable natural resources. As highlighted in the 2022 Business Plan, the Group is committed to implementing particularly developed separated waste collection systems to increase material recovery. Attention to impacts is relevant to the management of waste-to-energy plants. Monitoring plans are envisaged for all waste-to-energy plants (Parma, Piacenza and Turin) which involve ongoing, regular emission measurements on a series of parameters. The gaseous flows generated by the combustion of waste are monitored from different process points, both continuously and with regular withdrawals, in accordance with the time-frame indicated by law. The collected data is sent to the local ARPA (Agenzia Regionale per la Protezione dell'ambiente - Regional Environmental Protection Agencies). As further confirmation of the attention focused on emission impacts, Iren Group has installed monitoring units managed by the local ARPA to control emissions outside of plants which measure the atmospheric concentrations of pollutants in the air. The Authorisations granted for the management also include specific provisions for individual plants such as, for example, the precautionary measuring of additional emission parameters, auto-monitoring and communications on events that deviate from normal plant functioning. For the waste-to-energy plants of Turin and Parma, a special programme of health surveillance is also provided to assess the effects on health of environmental pollution in the areas around the waste-to-energy plants, which are subject to public consultation;





- **water sector.** The Group constantly monitors network leaks that can cause significant water wastage: network control, extension and maintenance interventions are completed with the aim of minimising inconvenience for residents. The high quality of water supplied is ensured by continuous analytical controls carried out, also in addition to legal obligations, out over the entire route: from the capturing sources to treatment processes, from filtration and disinfection and from storage tanks to storage at various points of the distribution network. In relation to wastewater treatment, Iren Group strives to maintain high operational standards of its plants in compliance with the limits set by current authorisations and to constantly inform the local community concerning the functioning of the plants themselves. As stated in the 2022 Business Plan, the Group has set the objective of reducing environmental withdrawals for drinking water and an increase in the reuse of treated waters for irrigation;



- **gas distribution.** The Group's objective is to reduce the number of network leaks through the gradual renewal of the network (elimination of cast iron pipelines and the reduction of the steel network without cathodic protection). The proper management of plants and gas networks, the use of appropriate resources and the use of suitable tools, together with continuous monitoring, are the main elements in preventing potential impacts or accidents. These elements are subject to constant analysis and improvement measures in order to continuously increase their effectiveness, while

respecting efficiency. Furthermore, in order to reduce the inconvenience for local communities when sites are opened, residents, economic associations and Municipalities are involved in defining the schedules and time for the construction sites;

- **electricity distribution.** In relation to the management of electricity networks, one of the main objectives is the constant maintenance of plant service levels in compliance with the resolutions in force. To safeguard the health of the communities, initiatives to guarantee compliance with electromagnetic field limits, in electricity substations in particular, are proceeding, also by way exact measurements on all new substations constructed. Additional measures regarding electromagnetic fields (EMF) of electricity distribution plants are carried out after receiving reports;

## CONSTRUCTION SITES MANAGEMENT

When managing construction sites relevant to scheduled activities that can potentially create inconvenience for the public, the Group works to reduce the impact on the local area to a minimum, coming to an agreement with stakeholders on the schedules, times and operational means of the construction sites for the works to be carried out, identifying strategic periods throughout the year (for example, during August), in order to minimise the impact on the public, with particular attention to disadvantaged groups and economic activities. Additionally, all the necessary measures are adopted to guarantee maximum site safety for citizens, especially in cases of work carried out on roadside sites. When planning and managing public street lighting and traffic lights, highly energy efficient materials are chosen (for example, the use of LED equipment), and the impacts on the health and safety of the public are constantly analysed and monitored.

The construction of new plants is an opportunity for growth for the local area in the medium/long term, in addition to being a necessity for the development of Iren Group. This dialogue between Iren and its stakeholders is therefore necessary, based on transparency and correctness of information. The Conference of Services is an example of cooperation between public administrations, citizens, businesses and local authorities, where dialogue with citizens and institutions is guaranteed. If there is a project of particular importance, the party appointed to issue the authorisation convenes the Conference of Services (made up of the various interested parties) which must give its opinion concerning the feasibility of the project, indicating the necessary conditions to obtain the agreements, opinions, concessions, authorisations, licences, permissions and the approval required by the law in force. For the operation of certain types of production installations, which may generate significant environmental damage, an IEA is necessary, an Integrated Environmental Authorisation, which verifies that the operation to be authorised has limited environmental impacts, in compliance with the conditions set by the European Union. There were no transfers, not even temporary ones, of people following on from the construction of new plants.

During 2017, only one accident was recorded in the local community: during excavation carried out by third-party companies to lay fibre optic cable, gas distribution infrastructure under concession to Ireti were damaged, with the consequent inconvenience for the public. Furthermore, 9 lost suits were recorded to the total monetary amount of €46,466: 4 for telecommunications breaches following an investigation into activities carried out by call centres, 4 for disputes with citizens (of which, 2 without payment) and 1 for the small payment of damages to property.



## EXTERNAL COMMUNICATION

In 2017, communication directed at stakeholders and the local communities are summarised as follows:

- **in Turin**, constant dialogue with Institutions (Piedmont Region, the Metropolitan City of Turin and the Municipalities) and local stakeholders continued. In relation to district heating, the authorisation procedures begun for the construction of heat storage systems in the San Salvario area, for a new heat exchange substation in the Lucento area and the expansion of the network. On the topic of waste management, the door-to-door service was implemented in the San Salvario district. Furthermore, innovative solutions for public street lighting using LED lights were introduced for projects in the field of energy efficiency for the development of innovative network systems and for e-mobility and smart city projects;
- **in Emilia**, discussion continued with local stakeholders on environmental topics and waste management with the new methods of separated waste collection, which saw, inter alia, the extension of the door-to-door service for the city of Reggio Emilia, the promotion of environmental awareness-raising initiatives in the city of Parma, in addition to the focus on district heating that will be extended significantly in Piacenza in the next few years. Furthermore, particular attention was paid to the energy efficiency of buildings and the optimisation of the use of energy resources;
- **in the Liguria area**, dialogue with institutional stakeholders (Liguria Region, Provinces and Municipalities) continued, especially on issues related to the construction of new treatment plants in the Genoa area, and on investments for

the renewal of distribution networks, as well as all matters concerning the acquisition operation for Acam La Spezia.

The new system of Group sites was completed during the year, with the construction and publication of the sites, which were completely overhauled in terms of graphics and content ([gruppoiren.it](http://gruppoiren.it), [ireninforma.it](http://ireninforma.it), [irenacqua.it](http://irenacqua.it), [eduiren.it](http://eduiren.it), [irenambiente.it](http://irenambiente.it), [irenlucegas.it](http://irenlucegas.it) e [www.ireti.it](http://www.ireti.it)). The Group has also consolidated its presence on the main social networks, such as Facebook, Twitter, YouTube, Instagram and LinkedIn and saw a continuous increase in the number of contacts and followers.

## EMERGENCY MANAGEMENT

The companies of Iren Group have emergency plans, which aim to illustrate:

- the organisation and Coordination Centres set up to address the emergency situations that could arise within the activities carried out by the Group;
- the management of information and relationships with the Prefectures, Civil Defence, Authorities, Regions, Provinces and Municipalities, including their relative operation rooms.

These plans have been drawn up to respond to potential accidents and alarm situations, which could occur after a natural disaster, explosions or fires, as well as preventing and mitigating the consequent damage to people and/or the environment.

For all monitored headquarters and plants, specific emergency plans are prepared that contemplate the most likely environmental and safety emergency scenarios. Emergency personnel have been identified at each site and plant, who have been trained and are regularly updated. Evaluation drills are carried out every year with the involvement of all personnel present. Company emergency plans were updated, redefining emergency organisation.

Emergency situations connected to possible environmental pollution during the operation of plants, or due to mechanical failure of instruments of control or measurement of chemical physical operating parameters, are managed in accordance with criteria of immediate action on the fault, by specialised personnel, 24/7, via the request and call of on-call technicians. The action aimed at fixing the failures occurs in the minimum time needed to carry out works.







## COMMUNITY AID

The Group shows its closeness to Communities affected by serious natural disasters by giving support to Local Administrations and aid and welfare Institutions, also by way of making employees and vehicles available.

Following on from the **serious situations in the Municipalities of Marche and Abruzzo**, hit at the beginning of 2017 by extraordinary snowfall, Iren accepted the invitation of the Civil Protection of Emilia Romagna Region, sending two vehicles with man baskets, two 4x4 vans for logistics, four salt trucks and 10 technicians prepared to face the snow emergency.

To face the **serious water crisis** which affected areas in the Emilia area for several months after no rainfall and little winter snow, the Group implemented technical initiatives to ensure the

procurement of water for the community. In particular, a campaign to search for water network leaks was launched and tankers were used to guarantee the widespread delivery of water. Furthermore, tank loading systems and the movement of the Nure riverbed were inspected and maintained. At the same time, an information campaign on useful conduct to rationalise and avoid water waste was promoted.

As a sign of solidarity and closeness to the people of Colorno (Parma) and Lentigione (Reggio Emilia), hit by **floods in December 2017**, the Group decided to give concrete help to its customers. To this end, gas and electricity bills were postponed and water consumption, exceeding the historical average, deriving from activities linked to flood events was remitted (local cleaning, debris clearing, etc.).



# Institutions



## IMPORTANT TOPICS



Dialogue with Public Authorities



Fight against corruption



Compliance with laws and regulations





## RELATIONSHIPS WITH INSTITUTIONS

Iren Group, as also indicated in its Code of Ethics, actively and fully cooperates with the Public Authorities, pursues the objectives indicated by the relevant Public Institutions and effectively cooperates with the authorities/institutions responsible for regulating and supervising local public services. These are objectives that the Group pursues, combining them with its mission and with the need for managerial and organisational autonomy that is the same for any economic operator.



## COMPLIANCE WITH LAWS AND REGULATIONS

The objective to develop in close liaison with the local communities and the territory, places at the heart of Iren Group's commitment the constant combination of the company's growth with the compliance with laws and regulations, while conserving the quality of the environment and promoting the protection of natural resources based on principles of sustainable development. To this end, the impact of the regulatory variables on the Group's results is constantly evaluated – through the quarterly preparation of regulatory framework by the Regulatory Affairs Department – which looks to identify and implement the most suitable plan of action.

The Italian and international regulatory framework is constantly supervised and monitored through the following activities:

- reporting, analysis and summaries concerning the transposition of updates on the subject and the interpretation and application of legislation of interest;
- the coordination and directing of company departments assigned, either directly or indirectly, to comply with information obligations by sector Authorities;
- the coordination and support of the company departments in managing the "antitrust risk" and the "regulatory risk".

The Group concentrates its activities on the active and proactive monitoring of regulatory developments relevant to all the business sectors in which it operates (energy, gas, waste, networks), participating in consultations, hearings before Chambers (both

directly and through the Trade Associations it subscribes to) and promoting direct meetings with the Authorities involved.

In particular, the topics observed in the various sectors are summarised below:

- **energy business** - market reform/updating (capacity market, MSD revision and extension, adjustment on imbalances), reform on the allocation of capacity at return points that power generation plants, district heating regulation, reform of the Energy Efficiency Certificates mechanism, hydroelectric concessions for large-scale diversions;
- **market business** - reform of protected market, revision of sale components (electricity and gas), reform of gas balancing, transport and settlement, regasification (combined capacity and storage auctions, tariffs for the actual recognition of costs incurred and revenue coverage factor);
- **environment business** - support for incentives for renewable sources and biomethane, the conferral of environmental powers to the Authority also, monitoring of the legislative framework of reference (Italian Ministerial Decree on Biomethane, Connected Agriculture, tariff mechanisms and waste assimilation criteria), tenders for awarding the service;
- **network business** - tariff regulation (recognition of operating costs and investments, also considering the future introduction of the Totex mechanism) and on the quality of the electricity service, second-generation electric smart meters, electric smart distribution system, network code, non-payment, safety obligations and gas tenders. With reference to the water sector: changes in the contractual quality protocol and the introduction of technical quality regulation, tenders for awarding the service, adaptation of national equalisation and type agreements.

All business units saw the following topics be monitored: unbundling and compliance, Remit implementation, (Regulation on the integrity and transparency of wholesale energy markets), the implementation of the Directive and regulation governing market abuse and the procedures of the Antitrust Authority (AGCM).

Furthermore, the Legal Affairs department studies provisions related to the sectors in which the Group operates, provides support and legal advice to all the structures of the Parent Group and Business Units and participates in working groups on the topics that involve the Parent Group or Business Units.

## RELATIONSHIPS WITH TERRITORIAL AUTHORITIES

In 2017, our constant discussion with Local Authorities and Territorial Authorities focused on the topics summarised below:

- monitoring the water network in Genoa, with the submission of reports to the competent Authorities on the progress of interventions. District division interventions were planned and implemented, in the City of Rapallo in particular, where a substantial reduction in water leaks was achieved;

- collaboration with the University of Genoa aimed at studying the materials of the older ducts for their scheduled replacement;
- collaboration to upgrade the treatment plants in the Metropolitan City of Genoa, in particular, the underwater pipeline was built that connects the Municipality of Camogli to the Recco municipal treatment plant, after its construction. Furthermore, the underwater pipelines for the drainage of the Genoa Darsena and Genoa Valpolcevera treatment plants were built, which allow treated water to be discharged over 1 kilometre from the coast, at a depth of 30 metres, surpassing the protective sea walls of the Port of Genoa. 85% of the treatment system of the Metropolitan City is currently equipped with plants in compliance with community and regional provisions;
- total investments made in sewage, water mains and treatment works by Iren Group, in 2017 within the ATO (water and waste regulation area) of the Metropolitan City, amount to 51 million Euro;
- the construction of the mountain water pipelines to connect the large Genoa reservoirs with all the Municipalities of Valle Scrivia;
- restoration measures and the updating of the plants and networks severely damaged by the floods in 2014 and 2016;
- the water emergencies that occurred in recent years on the aqueduct network of Paradise Gulf and the Gulf of Tigullio Orientale have been overcome;
- the identification of the areas for the construction of new treatment plants for the Gulf of Tigullio, with the recent resolution of the Mayors' Assembly for the Ramaia site in the Municipality of Sestri Levante, for which the characterisation of the area is underway and the preliminary project has been developed. Dialogue was opened with the Municipality of Chiavari, the [EGA](#) and the Liguria Region to resolve the problems related to identifying the site for the municipal treatment plant of Entella;
- construction of the Rapallo treatment plant in compliance with the timeline chart sent by the Commission for European treatment infringement procedures;
- planning of the plants of Ronco Scrivia, Torriglia and Arenzano/Cogoleto;
- the entry into force of the second regulatory period 2016/2019, in relation to the tariff of the integrated water service. Constant dialogue with the A.T.O.s (water and waste regulation areas) and Local Authorities has allowed us to achieve the right balance between tariff increases and the need for local investment, in compliance with the requirements laid down by law.

In Emilia, the activity of the 62 public water dispensers continued, where, every year, hundreds of citizens choose to drink water from the water mains, provided by dispensers in operation in the provinces of Parma, Piacenza and Reggio Emilia, allowing for lower consumption of plastic bottles and, consequently, lower waste production.

In 2017, institutional visits continued to the reuse plant for irrigation purposes using water from the Reggio Emilia treatment plant, which represents an excellence within the sector.

The Mancasale plant is an important element of the regional management and treatment plant and an excellence at a national level. Indeed, it is the first plant in Emilia Romagna that reuses wastewater to irrigate agricultural fields.

During the irrigation season, the plant allows a total water amount to be recovered that varies between 4 and 5 million cubic metres.



## TRADE ASSOCIATIONS OF WHICH THE GROUP IS A MEMBER

In order to create opportunities for discussion and collaboration with other companies and to facilitate regulatory and technological compliance, Iren Group is a member of several national and international technical associations in the water, environmental and energy fields, briefly described below.

**Utilitalia**, federation that brings together public service Companies that operate in the water, environment, electricity and gas sectors, acting as their representative with European and national Institutions. It was created from the merger between Federutilità (water and energy services) and Federambiente (environmental services). It offers support and refresher and training courses, as well as consultancy on contractual, legislative, operational, tax and legal aspects.

**Confservizi** (at a national and regional level), a trade union that represents, promotes and protects companies and bodies that manage public services such as water, gas, electricity, environmental health and local transport.

**Confindustria** (regional branches of Genoa, Parma, Piacenza, Reggio Emilia and Turin), the leading organisation representing manufacturing and service companies within Italy that is tasked with contributing to the economic growth and social advancement of the country, alongside political institutions and economic, social and cultural organisations.

**Assonime**, association of Italian Joint-Stock companies. It works to improve industrial, commercial, administrative and tax legislation in Italy and represents the views of the companies within Italian, European and international institutions.



**Anfida**, national association of private water works companies that belong to Confindustria which promotes solidarity and collaboration between its member companies, organises studies on topics of interest and acts as their representative with private and public authorities, organisations and administrations.

**AIRU**, Italian Urban Heating Association, which represents sector operators with the aim of promoting and disseminating plant engineering innovation and its application.

**EHP - EuroHeat and Power**, international association that represents the district heating and cooling sector and cogeneration sector within Europe.

**Elettricità Futura**, the main Italian electrical association, created from the merger between AssoRinnovabili and Assoelettrica. It represents and protects both big and small companies that operate within the electricity sector in Italy and counts over 700 operators with plants over all of Italy.

**RES4MED** - Renewable Energy Solutions for the Mediterranean, a non-profit association founded as a network of utilities, industries, companies and suppliers of technical services, research institutes and academia involved in promoting clean energy solutions to the countries in the Southern and Eastern Mediterranean.

The participation process for Group companies within these Associations began in 2015 and continued with the effective streamlining and subsequent greater coordination of memberships to sector and trade Associations, Research and Study Centres and Authorities to promote innovation and internationalisation.

## CONTRIBUTIONS TO POLITICAL PARTIES AND INSTITUTIONS

As established by the Code of Ethics, “Iren does not pay contributions, either directly or indirectly nor in any form, to political parties, movements, committees and organisations or trade unions, or their representatives and candidates, except where owed in accordance with specific legislation”.

The Group collaborates with Institutions, also financially, for specific projects that are attributable to its mission and, in particular, for projects that contribute to the economic, social and environmental sustainability of the areas of reference: these collaborations are always implemented on the basis of clear documentation of the resources used

## MEDIA RELATIONS

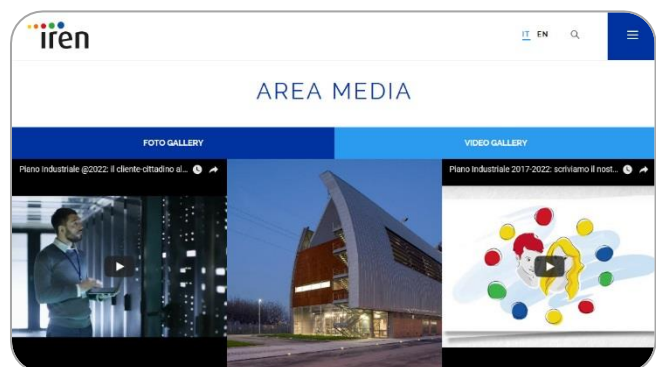
The Group manages national and regional media relations activities concerning economic-financial, institutional and service aspects, as well as other topics connected to sustainability. During 2017 it continued to play an important role for the local and national press as a major Italian player in the management of environmental, energy and water services, due to the dimensional and business characteristics of the Group.

Over the year, there were over 10,600 publications across various communication methods, of which around 7,900 in print and over

2,700 on major websites. The approximately 7,000 publications on minor websites can be added to these figures, which are proof of the Group’s commitment to service communication and growing media interest. These are significant numbers which correspond, in print alone, to around 120 million copies sold and a readership of over 790 million potential leaders (source and estimate: Ecostampa).

Presence is the same across all areas, while the topics of specific national interest are events connected with the financial calendar, negotiations for the acquisition of other companies and the presentation of the 2022 Business Plan. At a local level, the media has favoured topics concerned with environmental initiatives, customer relations, energy saving, water quality, water saving and the construction or presence of plants in the area.

Media relations help ensure a constant, timely and transparent flow of communication for all stakeholders and involves systematic relations with local and national journalists that are managed according to the principles of availability and transparency, with the awareness of the affinity of the Group to the local area and to the needs of the communities. The Group’s press office monitors the media and social networks to guarantee that management is constantly aware of public opinion and the views of the financial community and the local areas of reference for Group companies.



## CORRUPTION PREVENTION

In carrying out its activities, Iren Group companies frequently interface with the Local Authorities and third parties, in compliance with the principles established by the Code of Ethics and the Model of Organisation, Management and Control in accordance with Italian Legislative Decree 231/2001, that expresses guidelines and regulations of conduct aimed at preventing, where possible, the commission of the relevant crimes pursuant to the same Decree, including corruption. Company processes are regulated by specific procedures defining roles, responsibilities and methods of control, establishing the traceability of processes and the clarity of authorisations to ensure transparency and honesty in the company’s activities.

In 2017, the new version of the Company’s Model 231 was approved, containing the updated mapping of processes and self-evaluation of 231-related risks, through which the processes and the “sensitive” company areas with a potential risk of commission

of the crimes indicated in the Decree were identified. In particular, sensitive activities at risk of corruption were identified, for which suitable internal rules were provided to supplement the Code of Ethics (general control principles and specific conduct and control protocols), such as, but not limited to:

- the selection and formation of contractual relations with the suppliers of goods, services or works;
- consulting selection and management (public and private parties);
- personnel selection, hiring and management;
- management of sponsorships, events, gifts and donations;
- management of relationships with public parties to attain or renew authorisations, licences and concessions for carrying out corporate activities;
- management of public grants, payments and contributions (even training).

Company processes are regulated by specific procedures defining roles, responsibilities and methods of control, establishing the traceability of processes and the clarity of authorisations to ensure transparency and honesty in the company's activities.

The risk evaluation and audit activities concerning the issue of corruption are carried out within the context of broader risk mapping and audits on internal monitoring systems. Within the

context of the conducted audits, and with reference to the processes being investigated, the adequacy of the internal control system is evaluated with reference to the most significant risks, including corruption (by way of example, note that in 2017 audits were carried out on the following processes: contracted work, sponsorships, consultancy, representative expenses current accounts with Municipality, Atena acquisitions).

The process mapping, risk self-assessment, the preparation of the Model of Organisation, Management and Control, the approval of the document by the Board of Directors, the dissemination of the document and training initiatives pertaining to it, are also training activities on anti-corruption for each of the parties involved in the various aforementioned activities. During the year, 3,186 employees took part in training initiatives on the crimes listed under Italian Legislative Decree 231, which also contemplates corruption prevention policies and procedures, involving all personnel with effective responsibility on the matter. On 17 October 2017, the Iren Supervisory Body also held a training course pursuant to Italian Legislative Decree 231/2001 for all members of the Board of Directors, the Board of Statutory Auditors and top-level Senior Managers.

In 2017, no instances of corruption were ascertained within Group Companies.

Communication and training on corruption prevention policies and procedures	2017		2016		2015	
	no.	%	no.	%	no.	%
<b>Trained employees</b>	<b>3,186</b>	<b>50.9</b>	<b>308</b>	<b>4.9</b>	<b>2,179</b>	<b>35.0</b>
of which Senior managers	94	100.0	17	17.9	31	37.4
of which Junior managers	256	97.7	34	13.8	124	50.6
of which White collar workers	2,817	97.3	256	8.7	2,007	68.9
of which Blue collar workers	19	0.6	1	0.0	17	0.6





# Shareholders and financial backers



## IMPORTANT TOPICS



Economic development and value for local areas



Competitiveness



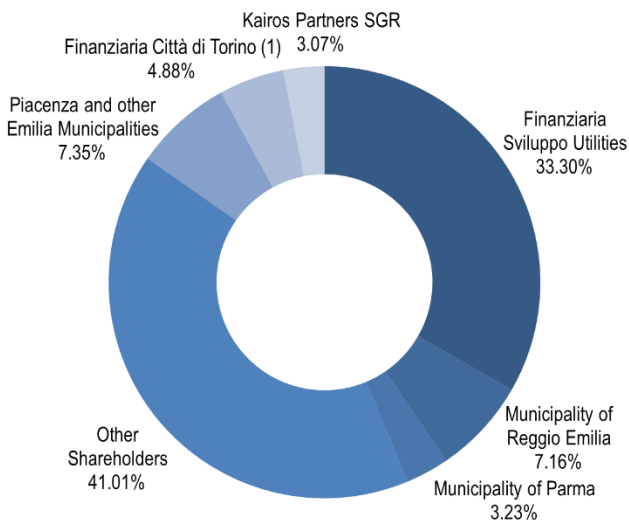
# RELATIONS WITH SHAREHOLDERS AND FINANCIAL BACKERS

Iren Group aims to create value for its shareholders, through targeted growth strategies and adequate management policies. To this we can add the Group's constant commitment to guaranteeing transparent, complete and timely communications by means of various methods, such as presentations to the financial community, press releases, the website and direct relations with analysts, investors and financial backers.

## SHAREHOLDERS

At 31/12/2017, the most significant Group shareholders, meaning shareholders that hold a stake in the company (including savings shares), directly or indirectly, are represented in the graph below.

SHAREHOLDING STRUCTURE OF IREN SPA (% OF TOTAL SHARE CAPITAL)



(1) Savings shares without voting rights, converted to ordinary shares on 11/01/2018 in favour of holders of exchangeable bonds, in which savings shares made up the underlying.

## RELATIONS WITH FINANCIAL ANALYSTS AND INVESTORS

Iren Group has always carried out an intense activity aimed at reinforcing the relationship of trust between the company and the shareholders and at increasing the interest and knowledge of Italian and foreign analysts and investors.

In 2017, the number of financial analysts that cover Iren increased from seven to eight, thanks to the coverage of the bond by Main First, from January onwards. The market's strong interest in the Group is confirmed by the aforementioned increase in coverage, both in the intensification of relations and opportunities for contact with the analysts themselves, also following on from the particularly positive performance of the Group supported by the efficiency raising project conducted in the last three years and by the presentation of the 2022 Business Plan, which occurred in

November. To this is added the positive effect created by the optimisation of Iren's financial profile, through greater recourse to the bond market than to the banking channel, confirmed by the issue of the Group's first Green Bond for 500 million Euro. This instrument contributes to reinforcing the strategic vision, which has always looked to sustainability, circular economy and energy saving.

In 2017, the portfolio of institutions that covered the bond included: Banca Akros, Banca IMI, Equita, Fidentis, KeplerCheuvreux, Intermonte, Main First and Mediobanca.

Financial communication was particularly significant over the year and continued to consolidate the improvement and intensification trend that had already begun in 2015. The outstanding operating results that characterised the last three-year period have translated to sharply increasing economic-financial performance, which further increased the interest of investors toward the Group, multiplying opportunities for contact. As with previous years, the Roadshow, organised from time to time by different banks, remained the main tool for introducing Iren to Italian and foreign institutional investors, both in terms of equity and credit. The Group participated in over 20 events, within Italy and abroad, and also visited some of the most important financial markets in Europe (London, Paris and Geneva) and America (New York and Boston). Moreover, some cities, where the Group introduced itself for the first time, were included in the communication activities, such as Chicago and Luxembourg. Over 200 funds met during the year, a marked increase of over 100 compared to 2016, mainly in one-to-one meetings. Of particular significance, the direct day-to-day contact with the managers of institutional funds and financial analysts that cover the bond.

Retail investors, on the other hand, were able to contact the company by telephone and email and find the most important Group news on the corporate site which, during the second half of the year, underwent significant restyling that made it simpler, more interactive and easier to use via modern smartphones. In addition to this, a link on the website [www.gruppoiren.it](http://www.gruppoiren.it) is available that allows for the presentation of the quarterly results to be listened to live through the webcasting service.

Institutional investors give increasing attention to environmental, sustainability and governance topics. Corporate governance that is able to make the Group efficient, dynamic and stable is a discriminant factor in the investment choices of the main players in financial markets. Any economic or financial performance, in fact, must be assessed based on its repeatability or potential for improvement in the following years and this can only happen thanks to rules of corporate governance in line with best practices. From this perspective, it is important to emphasise that market appreciation for the Group's governance is also reflected by the performance of the bond, which has seen its value increase by around 170% in the last three years.

The Group's focus on the growing number of investors that are particularly attentive to considering non-financial factors in their long-term investment choices, is demonstrated by the emission of its first Green Bond at the end of last year.



## PERFORMANCE OF THE IREN BOND IN 2017

In 2017, the FTSE Italia All-Share increased by around 13.6%, mainly thanks to the recovery of bank stocks that negatively affected the 2016 trend, driven by a general increase in the indices of the world Stock Exchanges. The Iren bond increased by 58.3% within this context, recording the best performance compared to its most direct competitors. The Iren bond at 29 December 2017, the last day of trading for the year, was € 2.50 per share, with average volumes of around 2.4 million pieces per day in 2017. The average price was € 2.08 per share, which reached the highest level since Iren was established (€ 2.65 per share) on 6 December and its minimum level of € 1.50 per share on 31 January. The bond is listed on the Italian Stock Exchange in Milan and is included in the following financial indexes:

- FTSE All Share, the index that includes all the shares listed on the electronic market of the Italian Stock Exchange, with the exception of micro-capitalised companies;
- FTSE Mid Cap, part of the FTSE All Share that includes the shares of medium-capitalised companies;
- FTSE Italia Servizi Pubblici, the sector index that includes the shares of companies that operate within public services.

The Group is also present on the FTSE Environmental Opportunities index group (see page 44).

There were no instances of fines or penalties for failure to comply with the obligatory regulations and laws for shareholders.

## VOLUMES AND PRICE TREND OF THE IREN BOND



## FINANCIAL BACKERS

The Group has relations with leading Italian and international credit Institutions, and has access to the capital market in order to research the most suitable forms of financing for its needs and the best market conditions. Iren has also implemented a management model focused on the resources and financial risk management with the objective of financial optimisation for all of the companies of the Group.

The sustainability of the financial profile has always been one of the key strategic elements for the Group. During 2017 the focus on this aspect was confirmed by the allocation of the "Investment Grade" BBB rating (by the Fitch agency) with a stable outlook, that improved by one notch compared to 2016. Fitch also confirmed the BBB rating for senior unsecured emissions. The reasons behind the improved rating mainly concern the structural growth of the Group's profitability, the achievement – in recent years – of significant synergies with results that exceed market expectations, the complete merging of some medium-sized companies subject

to major territorial consolidation and the reduction in the cost of debt, combined with the early achievement of financial flexibility targets. Fitch holds that the financial ratios of the Group will remain stable with the BBB rating within the time horizon of the new Business Plan (2017-2022).

In support of the Group's liquidity profile and the rating level, committed credit lines were contractually agreed that, as at 31 December 2017, amount to 70 million Euro. Iren also has medium-to-long term credit lines available, yet unused, of 235 million Euro. In particular, the new loans were granted to support investment plans and, confirming the trust held by the financial system in relation to the Group's development projects, allow for the suitable balance between financial exposure in the short and long term to be maintained. In particular, the consolidation activity for loans with the European Investment Bank (EIB) continued to support the Group's investment programme. On 28 March 2017, Iren signed a loan agreement for 75 million Euro, to be used in several instalments, with a duration of 15 years. The loan awarded to Iren, after the positive outcome of the economic and





technical-environmental investigative work performed by the EIB, is allocated to support the 2017-2021 investment plan concerning the electricity network development and modernisation projects with environmental sustainability characteristics, and the related research and development activities. In particular, the investment programme concentrates on the redevelopment of existing plants and the substitution of electronic meters with second generation equipment. This loan strengthens the Group's financial profile and further consolidates its collaboration with EIB, emphasising the attention Iren places on environmental sustainability and social and economic topics.

In relation to transactions on the capital market, on 26 September 2017 the BoD resolved the renewal of the EMTN programme,

#### IREN BONDS IN CIRCULATION AT 31/12/2017

Bond	ISIN	Bond amount (€/000)	Amount in circulation (€/000)	Ann. coupon (%)	Bond duration (Years)	Expiry	Price Emission (%)	Rating
Green Bond	XS1704789590	500,000	500,000	1.50%	10	24/10/2027	98.356	BBB
Eurobond 2024	XS1511781467	500,000	500,000	0.88%	8	04/11/2024	98.974	BBB
Eurobond 2022	XS1314238459	500,000	359,634	2.75%	7	02/11/2022	99.398	BBB
Eurobond 2021	XS1086104681	300,000	181,836	3.00%	7	14/07/2021	99.225	BBB
Private Placement	XS0979548954	260,000	167,870	4.37%	7	14/10/2020	100.783	n.a.
Private Placement	XS1030889411	100,000	89,100	3.00%	5	11/02/2019	98.728	n.a.

## GREEN BOND

On 17 October 2017, Iren concluded the issue of its first Green Bond to great success (Fitch BBB rating) with a duration of **10 years for a total amount of 500 million Euro**. The transaction, shown to investors and analysts through roadshows in the main European markets, recorded an extremely positive response with total demand of around **2.2 billion Euro (4 times the offer amount)** and with the **participation of Socially Responsible Investors (SRI)**, allowing the Group greater diversification of its investor base. The Green Bond, which brought significant optimisation work on Iren's financial profile to a close, was allocated to the **refinancing of 18 projects** within four categories: **energy efficiency, renewable sources, efficiency raising in the waste management and recycling and wastewater treatment**. The list of projects financed by the Green Bond was

adopted in 2015 and already renewed in 2016, increasing the maximum amount of bonds that can be issued, also under the form of Green Bonds, to a total of 2 billion Euro. Within the framework of the EMTN programme, Iren concluded the Green Bond issue (Fitch BBB rating) with a duration of 10 years on 17 October 2017.

Also to optimise the financial structure of the Group, various liability management activities were carried out to take advantage of favourable market opportunities.

There were no instances of fines or penalties for failure to comply with the obligatory regulations and laws for financial backers.

defined by Iren and its compliance with exact environmental criteria was ensured by an external body.

The Green Bonds, which have a minimum denomination of € 100,000 and expire on 24 October 2027, pay a gross annual coupon of 1.50% and were placed at an issue price of 98.356%. The effective rate of return at maturity is **1.68%, corresponding to a yield of 85 base points above the 10-year mid-swap rate**. The bonds were listed on the regulated market of the Irish Stock Exchange and on the ExtraMOT market of the Italian Stock Exchange in the recently established Green Bonds segment. Subject to the issuance of the Green Bond, a liability management transaction was conducted, in line with previous years, with the launch on the market of a Tender Offer on company bonds that expire between 2019 and 2022. The repurchase transaction was completed on 24 October 2017, amounting to 92 million Euro.

Project categories	Investments at 31/12/2017 (thousands of Euro)	No. of projects
Energy efficiency	232,587.45	6
Renewable energies	160,950.17	7
Efficiency raising in waste management and recycling	42,123.50	1
Wastewater treatment	56,118.88	4
<b>TOTAL ALLOCATED</b>	<b>491,780.00</b>	<b>18</b>
Issue discount	8,220.00	
<b>TOTAL</b>	<b>500,000.00</b>	

More information on the Green Bonds and funded projects is available on the [gruppore.it](http://gruppore.it) website, in the Financial profile section.

# Future generations



## IMPORTANT TOPICS



Environmental education



Innovation and smart cities



## SUSTAINABILITY EDUCATION

For many years now, Iren Group has been committed to sustainability education as it believes it to be the most effective and strategic means of asserting a culture of sustainability and innovation.

The **Edu.Iren** project represents a starting point, which makes available a catalogue of free training proposals for students and teachers (guided visits, educational workshops, class lessons and educational games), a collection of educational materials and projects on sustainability, water, energy and environmental topics. In 2017, it was decided to extend the range of educational courses beyond the traditional school year, making them available to the many summer experiences that interest younger people. At the same time, it was attempted to intensify adult training courses.



In 2017, Edu.Iren involved **90,292** people in its training projects and **95** educational projects, promoted in schools by the individual Municipalities and supported by Iren Group, involving over **700** schools in the Emilia, Liguria and Turin area. In the Vercelli area, a total of **130** training and workshop-based interventions were managed on the waste cycle and recoverable materials (glass, metals, paper, plastic and organic), **23** educational initiatives concerning the water cycle, **14** on energy saving and **5** visits to the Municipal Multi-Collection Centres.

*Edu.Iren: around 90,300 students and over 700 schools involved in sustainability education projects*

The training offer is available on paper, sent to the Schools in the areas and to its Partner Municipalities, and on-line at **www.eduiren.it**, so that it can be accessed easily and immediately by students and teachers.

110 plants are open to visits by students and residents, in line with the Group's philosophy and values of transparency.

For the **Reggio Emilia** area, many projects were created in collaboration with other parties present in the local area, as for Iren sustainability education also means exchanging skills and knowledge. Of these, please note, in the province of Reggio Emilia, "**Water Week**", developed together with the Municipality of Rio Saliceto and the Local Health Agency, the "**Eroi del rifiuto**" (Heroes of Waste) project with the Municipality of Cadelbosco Sopra, the initiatives promoted by CEAS "**Terre Reggiane - Tresinaro Secchia**", which mobilised citizens of all ages in 5 Municipalities and the collaboration with the **Agricultural Museum and the Farming World of San Martino in Rio**. The imagination of children led to the creation of a panel for the public water dispenser adopted by the Praticello di Gattatico Nursery. The creativity of younger residents lies at the heart of the "**Impariamo dai Bambini**" (We Learn from Kids) project, created with the Municipality of Parma and the Cittadella Committee, which enhanced the city parks with signs produced by 15 primary school classes, or the "**Cucinare Sostenibile**" (Sustainable Cooking) project, which looks at sustainability topics through cooking, together with Pause-Reggio Children and the Magnaghi Hotelier Institute in Salsomaggiore. Sustainability was also studied outside of the classroom in the "**Orto della Condotta**" School Garden, together with Slow Food Piacenza, in afternoon "**Giochi di Cortile**" (Games in the Courtyard) with ACER and Uisp in Parma or cycling to visit a treatment plant with the **geobike**, together with Central Emilia Conservation in Mancasale (Reggio Emilia). The collaboration with the **Educational Giocampus Project** was also strengthened, promoted by the Municipality of Parma, Barilla, CONI, the University of Parma and Cus Parma, which saw Iren take part in the creation of some water and waste projects during the summer, which were transformed into training offers for the schools with Madegus. The project involves **8,000** children every year during the school year and the summer period.

The collaborations in Turin and Piedmont were also important, starting with the collaboration with the Non-Profit Science Centre within the context of "**Le settimane della Scienza**" ("Weeks of Science") and "**Le Settimane della Scienza a scuola**" ("Weeks of Science at school") projects, and the now constant presence of the **Mobile Environmental Centre** (travelling educational space) at many Turin events. Projects were created with the Abele Group (Drop House), Gran Paradiso National Park, the Regional Natural Science Museum, the Environmental Museum and other local associations. These are experiences that showed that sustainability is environmental culture, but also the inclusion of foreign citizens, as in the case of **C.A.S.A.** Alma Terra or the projects against early school leaving ("**Provaci ancora Sam**" – Try Again Sam) with the Municipality of Turin.

However, education can also occur in theatres, as demonstrated by the show "**Acqua nera, acqua chiara. Una storia del tubo**", ("Dirty Water, Clean Water. A Pipe Story"), produced by Iren and put on by the Ortica Theatre in Genoa, or **Rifutando** (Refusing) in Piacenza together with the Manicomics Theatre, one of the longest-running collaborations between a business and a theatre company, which also produced the **Environmental Theatre course** that Iren offers every year to teachers in their reference areas.

**Centro di Riciclaggio Creativo REMIDA** (REMIDA Creative Recycling Centre), promoted by Iren together with the Schools and Nurseries of the Reggio Emilia Municipality and managed by the Reggio Children Foundation-Loris Malaguzzi Centre, has reached its 20th anniversary, confirming its role as a driver of sustainable practices and thinking in Italy and abroad. Over 400 structures collect manufacturing waste for free from over 200 companies and over 6,000 people have visited the centre from all over the world.



The **Combined School and Work at Iren** project merits discussion. The experience was created in 2016 with the protocol signed with the Regional School Authorities (RSAs) in Emilia Romagna, Piedmont and Liguria. It is divided into three, three-year implementation plans with the aim of making Iren Group a school: the facilities include classrooms, desks, technicians and masters of the trade – a place where people can learn the basics of a profession, the importance of occupational safety and the value of discussion and teamwork. Iren is an open community where employees and students become almost colleagues, visiting sites, networks and plants. Schools were involved in the collaboration with the Regional School Authorities, together with which individual projects were built, starting from requests received from different local areas and schools, focusing attention on the development of the typical skills and knowledge of the professions and the businesses that characterise Iren Group. The criteria for selecting the young people that would begin internships at company structures were agreed with the schools, the primary objective being to prepare them to face, an informed way, the path that will one day take them to join the job market and, therefore, to provide them with real support in terms of direction also. The training offer included guided tours to the Group's most important plants, also focusing on a sort of "Erasmus" exchange between local areas (Turin schools visited plants in Emilia and Campania and Genoa schools were hosted by plants in Emilia and Piedmont), as well as meetings to analyse the main business areas. The teaching methodology adopted was designed to favour the involvement of all the class, using **flipped classroom models**. The experiences of colleagues were also enhanced when they recounted the story of their training course and the services in which they operate to their former schools. Students were also able to reflect on the culture of work and corporate organisation, thanks to role playing designed in collaboration with the Turin Science Centre, conducted by Iren

teachers. Currently, around 30 institutions are involved, with over 1,000 students on in-class training courses and 135 young people who have done or will do internships, amounting to around 800 hours of classroom training and 8,000 hours of internships.

**Sei Eco-logico?** (Are you Eco-logical?), the combined school and work course launched with the students of the Calvino Technical Informatics Institute in Genoa, was selected by MIUR as an Italian excellence. The trialled formula focuses on entrepreneurship and is intended to precede other initiatives in which Iren is the customer and the school is the supplier and where the "point of view" of the young people, digital natives, can be an added value for the quality of the result. The content will be available online and available in an installation for young people that can be seen at the Città dei Bambini educational play area in Genoa. The initiative was studied and presented in a Master's thesis in Digital Humanities.

## RESEARCH AND INNOVATION IN IREN

### SUSTAINABLE INNOVATION

The technological innovation of Iren Group is at the heart of its strategic choices and of the definition of the products and services offered by the Group.

The 2022 Business Plan confirms the central nature of innovation in the Group's vision, which will be implemented in the development of all the operational sectors, with the aim of making Iren the benchmark for excellence and innovation in the multi-utilities sector. The main research, development and innovation areas in which Iren Group is investing include:

- energy efficiency applied to more levels and assets (customer, building, conurbation and energy assets);
- study of new systems for the recovery of energy waste and an increase in plant efficiency;
- advanced systems for remote management, remote reading, smart metering and multi metering;
- thermal energy and electricity storage systems;
- systems for energy and material recovery from organic matrix waste from separated waste collection or purification sludge;
- Internet of Things (IoT) and home automation;
- data intelligence ICT tools;
- optimised management of the integrated water cycle (division of areas into districts, identification and a reduction in network leaks) and tools to support sensors in the field;
- electric mobility;
- "industry 4.0" solutions to support personnel involved in plant operational and maintenance activities, for predictive maintenance and in-the-field monitoring.

*Innovation is central to Iren Group's vision and strategic decisions*





Iren Group manages innovation processes through an open innovation model, and in line with that model, has launched profitable collaborations with Universities, Research Centres, Innovation Hubs and innovative start-ups. Furthermore, it actively participates in working groups and associations on specific research and development topics and promotes events such as conferences, workshops and hackathons.

2017 was characterised by the continuation of technical activities regarding the various projects co-funded by the Group, both in development and partnerships with innovative companies and start-ups, of technological start-ups on the basis of planning, which – starting from the analysis of the long-term scenario, aims to provide the Group with the tools needed to seize opportunities and mitigate risks deriving from the development of the markets in which it operates. During the year the innovative start-up search continued through dedicated events, such as the first “Iren Start-up Award”, a competition that saw the participation of over 80 start-ups, which was won by Enerbrain, a start-up active in the sector of advancement management of heating and cooling systems. The activity will be enhanced in 2018 by the launch of the “Corporate Venture Capital” programme for direct investment in start-ups.

### *Over 10 million Euro for innovation and research projects in collaboration with national and international partners*

In 2017, Iren actively took part in 14 research and innovation projects for a total multi-year commitment of around 10.5 million Euro, of which half was financed by research and innovation tenders managed by institutions such as the European Union, the Italian State and Regions (for example, Horizon 2020, Framework Programme 7, MIUR, POR FESR, etc.). These projects involved a commitment of around 1.7 million Euro over the year, 1 million of which was funded through the tenders mentioned above. These projects actively involve around 90 Group employees belonging to different business areas and with diverse operational activities, and guarantee collaborations with numerous businesses and academic institutions located in over 90 European cities.

The **Pump-Heat** project (European Horizon 2020 programme) is an example of international collaboration. Launched in October 2017 with 14 partners from 8 different European countries, which aims to introduce innovative solutions for increasing the flexibility of major electricity plants in favour of renewable sources. Specifically, at the Moncalieri Power Plant (Turin), a pilot project will be carried out to test the technologies studied and developed during the project.

The **Planet** project (European Horizon 2020 programme), which begun in November 2017, instead aims to develop technologies and analyses of regulatory limitations for the synergistic utilisation of distribution networks (electricity, gas and thermal). Also, in this case, Iren is involved in the development of a physical pilot project, where storage and energy conversion systems will be tested.

Another topic of major interest is the optimised management of consumption. The **Esacom** project (Piedmont region innovation

hubs contest), begun in September 2017, aims to develop a technological platform able to provide stakeholders with a scalable management tool for energy data and existing plants, objective and subjective measurements in the field, optimised regulation of plant parameters and implementation, to achieve measurable energy savings.

The optimised, synergistic and innovative management of Group assets was further applied to the **Flexmeter** project (European Horizon 2020 project): during the project, which finished at the end of 2017, ICT architectures were trialled that enable a system of multi-service smart metering, both for end users and electricity distribution assets, all supported by innovative services for the various stakeholders. Similar objectives, in terms of applicative models for the optimised management of the integrated water service and the study of innovative technologies for treating wastewater, lie at the heart of the **SmartWaterTech** project (MIUR competition).

The relationship between different energy and service providers, on a different level to Flexmeter, is also the aim of the **Celsius** project (European programme FP7), which ended in December 2017, the smart city project of the city of Genoa that uses a turbo-expansion system to transform the fall in pressure of a gas pressure reduction station into renewable electricity.



The trial of innovative systems, specifically in the integrated water cycle, was the driver behind **Reqpro** (Life+ programme), which ended in March 2017, that co-funded the development of a civil wastewater filtration system using sand filters and final disinfection with UV rays and hydrogen peroxide, in order to make sure that the water leaving the plant complies with irrigation uses.

The trial of innovative plant design solutions also lies at the basis of the **Biometh-ER** project (Life+ programme) to produce and use the biomethane gas produced by sewage sludge through a prototypical biogas upgrading system.

Innovation must also be directed to improve and streamline corporate and working processes: in this regard we have the **BlueSCities** project (2020 Horizon programme), which saw the preparation of a “practical guide”, benchmarking and best practice activities to apply to efficient management of the integrated water service and waste in the urban sectors. The project concluded in February 2017.

The **Waterspy** project, on the other hand, intends to develop and define a methodology to detect the presence of heterotrophic bacteria (e.coli, pseudomonas aeruginosa and salmonella) in aqueous matrices. This instrument, which is to be developed as a prototype for use in the field on sources of procurement for the water service (artificial lakes) and on the distribution network, includes a pre-concentration phase that allows a biosensor to bind the bacteria on a surface, which will then be analysed with laser technology. The development of an instrument that works within the indicated range could open up substantial possibilities in the pervasive monitoring of water quality.

In order to improve and refine the use of company GIS systems, Iren also participated in the **Geosmartcity** project (European CIP project), which came to a close in February 2017, the objectives of which included interoperability between the databases of subsoil users.

Iren Group is also very attentive to electricity storage: The **Store&Go** project, (Horizon 2020 project), which will demonstrate 3 innovative power to gas (PtG) systems, located in Germany, Switzerland and Italy, in order to identify and overcome technical, economic, social and legal barriers. The project aims to evaluate the possibility of integrating the PtG storage system within cutting-edge energy production and distribution systems.

**Sustainable mobility** is another important objective of innovation in the Group: its declination on the one hand provides for the installation of fixed electric charging infrastructures in the various areas it operates in, and on the other hand, the study of induction systems, as developed in the **Fabric** project (European programme FP7). This technology could be the engine for the massive development of the electric mobility of the future. In parallel, the **NeMo** project (Horizon 2020 programme), includes the development of an e-roaming platform applied to different electric mobility systems (vehicles and recharging infrastructure). The main objective is the creation of a supra ICT infrastructure able to standardise data from various stakeholders and generate innovative services and applications across various levels.

In 2018, Iren Group will launch 4 new projects that have successfully passed the evaluation stage in 2017.

The **eVolution2G** project (EMEUrope Call 2016) will analyse and test, right in the field, the vehicle to grid (V2G) concept, i.e. a system in which electric vehicles play a balancing role for electricity networks. The **Chester** project (European Horizon 2020 programme) aims to develop and integrate an innovative Power-

to-Heat-to-Power solution that allows maximum exploitation of non-programmable renewable energy sources and renewable thermal sources already paired with district heating systems. **Ottempo** (Piedmont region innovation hubs competition), on the other hand, aims to study and test distribution methods via a wireless or fibre-optic telecommunications network, of the time sample, i.e. the exact time, with precise to the micro-second, with application in real-time monitoring systems of the water service and electricity distribution networks. Lastly, in the **Everywh2ere** project (European Horizon 2020 programme), Iren, as a third party, will test a hydrogen skid for the production of electricity during events/exhibitions (continuous group mode/mobile generator).

## FONDAZIONE AMGA

The AMGA Foundation was established in 2003 to promote and organise scientific, educational and cultural initiatives aimed at protecting the environment and water resources and the optimal management of network services. To this end, it looks to increase and disseminate knowledge and understanding about the water cycle and its interactions with the environment, within research and training projects orientated at allowing sustainable management and promoting economic growth and development of the local areas in which it operates.

Furthermore, it is committed to research activities on the organisational models of water services and, more generally, public services, in order to assess the possible management options within the various regional scenarios. The skills acquired are made available by the organisation of training courses and seminars and the publication of technical and educational volumes. The scientific results obtained by the Foundation are a valid reference in the water resources, energy and environmental management sectors; activities to which AMGA Foundation dedicated itself in 2017, by coordinating research projects and promoting wide-ranging cultural and educational activities.

### 2017 ACTIVITIES

Some of the initiatives promoted by the Foundation during 2017 are given below and include research activities, training, cultural, educational, informational and editorial initiatives.

Areas	Projects
Economy and regulation	<ul style="list-style-type: none"> <li>• <b>Empirical evidence concerning the estimate of the cost of capital in utilities:</b> the inclusion of the waste sector as one regulated by ARERA could lead to the need to quantify the cost of capital in the tariff formula. The study focused on the most controversial points of the cost of capital estimate and analysed the topic for the waste sector, reviewing existing international literature and making an econometric estimate for listed monouility companies. The peculiarities of the sector were also highlighted, which may justify the differences compared to other regulated sectors.</li> </ul>



## Areas

## Projects

### Economy and regulation

- **Menu regulation and Totex approach:** Italian regulation in the energy and water sector involves incentives for efficiency, which are substantially limited by the Opex cost component. This may lead to sub-optimal incentives for companies. ARERA, aware of these risks, is considering introducing a Totex-type regulation (Capex+Opex), with the total expenses considered efficient recognised in the tariff, divided into a standard division between expenditure treated as opex and expenditure treated as capex. The study evaluated the challenges that this change could entail, including an analysis of the British experience also.
- **OPM parameters, potential methodological limitations and benefits:** the study analyses the OPM parameter (ratio between total operational costs in 2014 and the population served), introduced within the asymmetrical regulation developed by the Authority, with the possibility for some operators to obtain more favourable treatment for the potential maximum growth of the tariff and the awarding of incentives for contractual quality. The study evaluates any methodological limits and benefits in the definition of the OPM parameter and its impacts in order to incentivise the operators to achieve higher levels of efficiency or service levels or greater tariff sustainability towards users.
- **Circular Economy: legislative framework, best practices identification and the development of projects at territorial level:** the study aimed to survey the best practices present in Italy and internationally with a view to the circular economy, comparing them and proposing scenarios that could be reproduced within the regional and national setting. In-depth research regarding legislation analysed the current regulatory framework of reference and proposed possible adjustments and updates to overcome legislative barriers and facilitate the transition to a circular economy.
- **Performance indicators for quantifying critical issues of the integrated water service and the evaluation of investments so that they can be overcome:** the study aims to define a system of performance indicators that allows for the quantification of critical issues in segments of the integrated water service, as defined by the Italian Regulatory Authority for Energy, Networks and Environment (ARERA), as well as the assessment of the effects of investments to be planned to overcome or mitigate them. The participation of the companies in the research group allowed for project results that could be used for the debate.

### Training, culture and education

- **Sei Eco-logico? Giochi e soluzioni per la sostenibilità** (Are you Eco-logical? Games and solutions for sustainability): this course was enhanced in 2017 by new content and a combined school and work project is currently under way, launched with the Calvino Technical Informatics Institute in Genoa, to transform it into a web application with games and solutions for sustainability in water, energy and the environment. The content will be available online and available in an installation for young people that can be seen at the Città dei Bambini e dei Ragazzi educational play area in Genoa. Sei Eco-logico was chosen by MIUR as an Italian excellence and published on the site of the Ministry on the "Alternating Stories" page.
- **Fetid water, history of water and the city:** this is a research study into the management and use of both clean and dirty water, in relation to the history and development of the city. The collected material, which illustrates developments in uses, habits, perceptions and health and environmental impacts, provides tips on training and entertainment. The events should entertain and inform about the mission of water sector companies in managing the integrated water service, with particular reference to "dirty" water, contributing to increasing public awareness at a time when water is a central issue in the political debate of our Country.
- **Collaboration in the publication of Agici/Springer "The Italian Water Industry - Cases of Excellence":** AMGA Foundation joined the project, collaborating to create a book, edited by Agici and published in English by a specialist publishing house (Springer). The aim of the work is to present the merits of the sector internationally. This occurs in terms of attracting capital and in terms of exporting the strong and articulated skills present in Italy in resource management in very diverse contexts. AMGA Foundation and Iren participated in the initiative with a contribution on the topic of "Circular economy and WWTPs: water reuse and biogas production" in which experiences gained were put forward, with particular reference to the reuse chain in Mancasale (Reggio Emilia) and purification of biogas from waste treatment in Roncocesi (Reggio Emilia).
- **Contribution to the "3rd General Report on Water Objective 2030", Utilitalia-Utilitatis, 2017 Edition:** AMGA Foundation contributed to drafting the Report with a contribution on the topic: "Innovation in water control and analysis". The article introduced the innovations in water control and analysis, highlighting critical issues and problems connected to particular conditions in which the managers of the integrated water service find themselves operating in today, the technological innovations that meet the needs of operators and the regulatory developments across a myriad of aspects concerned with laboratory controls and online measurements identified by companies in the field of technological scouting also.

# COMPLIANCE WITH THE GRI STANDARD AND LEGISLATIVE DECREE 254/2016

Indicator	Application	Law 254/16	Page/Notes
<b>Organizational profile</b>			
102-1	Name of the organization	Core	• Cover
102-2	Activities, brands, products, and services	Core	• 19-25
102-3	Location of headquarters	Core	• Back cover
102-4	Location of operations	Core	• 18
102-5	Ownership and legal form	Core	• 16, 132
102-6	Markets served	Core	• 18-25, 84-92
102-7	Scale of the organization	Core	• 16, 19-25, 54, 67-69, 84, 88, 94 Annual Report at 31 December 2017
102-8	Information on employees and other workers	Core	• 16, 23, 94-106
102-9	Supply chain	Core	• 108-110
102-10	Significant changes to the organization and its supply chain	Core	• 9, 16, 108
102-11	Precautionary Principle or approach	Core	• 37-38
102-12	External initiatives	Core	• 26, 41, 78
102-13	Membership of associations	Core	• 127-128
<b>Strategy</b>			
102-14	Statement from senior decision-maker	Core	• 6-7
102-15	Key impacts, risks, and opportunities	Comprehensive	• 45-51, 58-63
<b>Ethics and integrity</b>			
102-16	Values, principles, standards, and norms of behavior	Core	34, 39, 78, 85, 87-89
102-17	Mechanisms for advice and concerns about ethics	Comprehensive	38-39
<b>Governance</b>			
Report on Corporate Governance 2017			
102-18	Governance structure	Core	• 26-32
102-19	Delegating authority	Comprehensive	26
102-20	Executive-level responsibility for economic, environmental, and social topics	Comprehensive	26
102-21	Consulting stakeholders on economic, environmental, and social topics	Comprehensive	• 27, 42-44
102-22	Composition of the highest governance body and its committees	Comprehensive	• 26-32
102-23	Chair of the highest governance body	Comprehensive	26, 28
102-24	Nominating and selecting the highest governance body	Comprehensive	• 26
102-25	Conflicts of interest	Comprehensive	27, 31
102-26	Role of highest governance body in setting purpose, values, and strategy	Comprehensive	• 34, 36
102-27	Collective knowledge of highest governance body	Comprehensive	27
102-28	Evaluating the highest governance body's performance	Comprehensive	• 26
102-29	Identifying and managing economic, environmental, and social impacts	Comprehensive	• 26-27, 31, 32, 36, 42-44
102-30	Effectiveness of risk management processes	Comprehensive	• 30-31, 36-38
102-31	Review of economic, environmental, and social topics	Comprehensive	• 26, 30-31, 36-38
102-32	Highest governance body's role in sustainability reporting	Comprehensive	• 9, 36
102-33	Communicating critical concerns	Comprehensive	27, 37-38
102-34	Nature and total number of critical concerns	Comprehensive	• 27, 38-39
102-35	Remuneration policies	Comprehensive	29-30
102-36	Process for determining remuneration	Comprehensive	28-30
102-37	Stakeholders' involvement in remuneration	Comprehensive	29-30
102-38	Annual total compensation ratio	Comprehensive	96
102-39	Percentage increase in annual total compensation ratio	Comprehensive	96





Indicator	Application	Law 254/16	Page/Notes
<b>Stakeholder engagement</b>			
102-40	List of stakeholder groups	Core	42-44
102-41	Collective bargaining agreements	Core	• 96, 110
102-42	Identifying and selecting stakeholders	Core	42
102-43	Approach to stakeholder engagement	Core	• 42-44, 126-127
102-44	Key topics and concerns raised	Core	10-14, 43-44
<b>Reporting practice</b>			
102-45	Entities included in the consolidated financial statements	Core	• 8-9, Annual Report at 31 December 2017
102-46	Defining report content and topic Boundaries	Core	• 9
102-47	List of material topics	Core	• 9
102-48	Restatements of information	Core	• 9, 60, 61, 62, 64, 66, 67, 72, 84, 85, 86, 88
102-49	Changes in reporting	Core	9
102-50	Reporting period	Core	• 8
102-51	Date of most recent report	Core	8
102-52	Reporting cycle	Core	• 8
102-53	Contact point for questions regarding the report	Core	153
102-54	Claims of reporting in accordance with the GRI Standards	Core	• 8
102-55	GRI content index	Core	• 141
102-56	External assurance	Core	• 8, 146-148
<b>Management Approach</b>			
103-1	Explanation of the material topic and its Boundary	Core	• 10-13 (see the topics shown in italics)
103-2	The management approach and its components	Core	• (see the topics shown in italics)
103-3	Evaluation of the management approach	Core	• (see the topics shown in italics)
	<i>Economic development and value for local areas</i>		10, 50, 54-56, 64, 133
	<i>Competitiveness</i>		10, 34-35, 50, 81-82
	<i>Impacts on local areas (suppliers)</i>		13, 111-112
	<i>Innovation and smart city</i>	•	10-11, 49, 137-140
	<i>Energy efficiency, renewable sources and district heating</i>	•	11, 45-46, 58, 70, 89, 92
	<i>Sustainable use of water resources</i>	•	11, 45-46, 59-60, 67
	<i>Biodiversity</i>	•	11, 73-75
	<i>Emissions</i>	•	11, 45, 61-62, 64-66
	<i>Circular economy: management, collection and reuse of waste</i>	•	11, 45, 60-61, 68-69
	<i>Responsible management of business segments</i>	•	11, 47, 62-63, 65, 70, 92
	<i>Sustainable management of the supply chain</i>	•	13, 49, 107-112
	<i>Employment</i>	•	11, 48, 94-96, 110
	<i>Industrial relations</i>	•	11, 97-98
	<i>Occupational health and safety</i>	•	11, 48, 103-104
	<i>Development of human resources</i>	•	12, 48, 96-97, 101-102
	<i>Corporate welfare and diversity</i>	•	12, 48, 98-101
	<i>Human rights</i>	•	12, 40-41, 97, 108
	<i>Development of local communities</i>	•	12, 50, 114-122
	<i>Environmental education</i>	•	12, 51, 136-137
	<i>Internal and external communication</i>	•	13, 79-81, 101, 123, 128
	<i>Service levels offered and customer focus</i>	•	12, 49, 78-92, 121-123
	<i>Efficient and reliable services</i>	•	11, 64-65, 67-72, 84-92,
	<i>Marketing policies</i>	•	12, 49, 78, 81-82
	<i>Construction site management</i>	•	12, 122-123
	<i>Emergency management</i>	•	12, 123-124
	<i>Dialogue with Public Authorities</i>	•	12, 126-129
	<i>Fight against corruption</i>	•	12, 38-39, 128-129
	<i>Compliance with laws and regulations</i>		13, 38-39, 76, 84, 126, 128-129

Indicator	Application	Law 254/16	Page/Notes
<b>ECONOMIC PERFORMANCE</b>			
201-1	Direct economic value generated and distributed	Comprehensive	54-56
201-2	Financial implications and other risks and opportunities due to climate change	Comprehensive	55
201-3	Defined benefit plan obligations and other retirement plans	Comprehensive	95, Annual Report at 31 December 2017
201-4	Financial assistance received from government	Comprehensive	56
<b>Market Presence</b>			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Comprehensive	96
202-2	Proportion of senior management hired from the local community	Comprehensive	55, 94
<b>Indirect Economic Impacts</b>			
203-1	Infrastructure investments and services supported	Comprehensive	54, 64, 119-121
203-2	Significant indirect economic impacts	Comprehensive	55, 136-137
<b>Procurement Practices</b>			
204-1	Proportion of spending on local suppliers	Comprehensive	111-112
<b>Anti-corruption</b>			
205-1	Operations assessed for risks related to corruption	Comprehensive	• 128-129
205-2	Communication and training about anti-corruption policies and procedures	Comprehensive	• 129
205-3	Confirmed incidents of corruption and actions taken	Comprehensive	• 129
<b>Anti-competitive Behavior</b>			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Comprehensive	84
<b>ENVIRONMENTAL PERFORMANCE</b>			
<b>Materials</b>			
301-1	Materials used by weight or volume	Comprehensive	• 63
301-2	Recycled input materials used	Comprehensive	• Not applicable due to the characteristics of the materials used
301-3	Reclaimed products and their packaging materials	Comprehensive	• Not applicable considering Iren Group activities
<b>Energy</b>			
302-1	Energy consumption within the organization	Comprehensive	• 58
302-2	Energy consumption outside of the organization	Comprehensive	• 58, 66
302-3	Energy intensity	Comprehensive	• Ratio between direct energy consumption and energy produced (Toe / MWh): 0.137
302-4	Reduction of energy consumption	Comprehensive	• 56, 65-66, 71-73
302-5	Reductions in energy requirements of products and services	Comprehensive	• 72-73
<b>Water</b>			
303-1	Water withdrawal by source	Comprehensive	• 59
303-2	Water sources significantly affected by withdrawal of water	Comprehensive	• 59, 74-75
303-3	Water recycled and reused	Comprehensive	• 59, 127 The reused water amounts to 5,458,658 cubic meters, equal to 1% of the total
<b>Biodiversity</b>			
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Comprehensive	• 74-75
304-2	Significant impacts of activities, products, and services on biodiversity	Comprehensive	• 73-74
304-3	Habitats protected or restored	Comprehensive	• 74-75
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Comprehensive	• 75
<b>Emissions</b>			
305-1	Direct (Scope 1) GHG emissions	Comprehensive	• 61, 66
305-2	Energy indirect (Scope 2) GHG emissions	Comprehensive	• 61
305-3	Other indirect (Scope 3) GHG emissions	Comprehensive	• 61
305-4	GHG emissions intensity	Comprehensive	• Ratio between emissions Scope 1 + Scope 2 and energy produced (tCO <sub>2</sub> / MWh): 0.37
305-5	Reduction of GHG emissions	Comprehensive	• 64-65, 70-73
305-6	Emissions of ozone-depleting substances (ODS)	Comprehensive	• 62
305-7	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions	Comprehensive	• 62



Indicator	Application	Law 254/16	Page/Notes
<b>Effluents and Waste</b>			
306-1	Water discharge by quality and destination	Comprehensive	• 60, 67
306-2	Waste by type and disposal method	Comprehensive	• 60-61
306-3	Significant spills	Comprehensive	• 62
306-4	Transport of hazardous waste	Comprehensive	• Not applicable because Iren doesn't transport, import or export waste shipped internationally
306-5	Water bodies affected by water discharges and/or runoff	Comprehensive	• 67, 74
<b>Environmental Compliance</b>			
307-1	Non-compliance with environmental laws and regulations	Comprehensive	• 76
<b>Supplier Environmental Assessment</b>			
308-1	New suppliers that were screened using environmental criteria	Comprehensive	• 109-110
308-2	Negative environmental impacts in the supply chain and actions taken	Comprehensive	• 109-110
<b>SOCIAL PERFORMANCE</b>			
<b>Employment</b>			
401-1	New employee hires and employee turnover	Comprehensive	• 95, 105
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Comprehensive	• 96
401-3	Parental leave	Comprehensive	• 99
<b>Labor/Management Relations</b>			
402-1	Minimum notice periods regarding operational changes	Comprehensive	• 98
<b>Occupational health and safety</b>			
403-1	Workers representation in formal joint management-worker health and safety committees	Comprehensive	• 103
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Comprehensive	• 95-96, 103-104, 106, 111
403-3	Workers with high incidence or high risk of diseases related to their occupation	Comprehensive	• 103
403-4	Health and safety topics covered in formal agreements with trade unions	Comprehensive	• 103
<b>Training and education</b>			
404-1	Average hours of training per year per employee	Comprehensive	• 102
404-2	Programs for upgrading employee skills and transition assistance programs	Comprehensive	• 94, 96-97, 99, 101-103
404-3	Percentage of employees receiving regular performance and career development reviews	Comprehensive	• 96
<b>Diversity and equal opportunity</b>			
405-1	Diversity of governance bodies and employees	Comprehensive	• 26, 28, 32, 95, 98-99, 105
405-2	Ratio of basic salary and remuneration of women to men	Comprehensive	• 99, 106 Remuneration data not available as partially paid in the following year
<b>Non-discrimination</b>			
406-1	Incidents of discrimination and corrective actions taken	Comprehensive	• 84, 98
<b>Freedom of association and collective bargaining</b>			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Comprehensive	• 110
<b>Child labor</b>			
408-1	Operations and suppliers at significant risk for incidents of child labor	Comprehensive	• 108
<b>Forced or compulsory labor</b>			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Comprehensive	• 110
<b>Security practices</b>			
410-1	Security personnel trained in human rights policies or procedures	Comprehensive	• Not applicable considering Iren Group activities
<b>Rights of indigenous peoples</b>			
411-1	Incidents of violations involving rights of indigenous peoples	Comprehensive	• Not applicable considering the location of the Group's activities
<b>Human rights assessment</b>			
412-1	Operations that have been subject to human rights reviews or impact assessments	Comprehensive	• 40-41
412-2	Employee training on human rights policies or procedures	Comprehensive	• 39
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Comprehensive	• 108, 110

Indicator	Application	Law 254/16	Page/Notes
<b>Local communities</b>			
413-1	Operations with local community engagement, impact assessments, and development programs	Comprehensive	• 42, 44, 121-122
413-2	Operations with significant actual and potential negative impacts on local communities	Comprehensive	• 121-123
<b>Supplier social assessment</b>			
414-1	New suppliers that were screened using social criteria	Comprehensive	• 109, 112
414-2	Negative social impacts in the supply chain and actions taken	Comprehensive	• 109
<b>Public policy</b>			
415-1	Political contributions	Comprehensive	• 128
<b>Customer health and safety</b>			
416-1	Assessment of the health and safety impacts of product and service categories	Comprehensive	• 78-79, 121-123
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Comprehensive	• 84, 123
<b>Marketing and labeling</b>			
417-1	Requirements for product and service information and labeling	Comprehensive	• Not applicable considering Iren Group activities
417-2	Incidents of non-compliance concerning product and service information and labeling	Comprehensive	• 84
417-3	Incidents of non-compliance concerning marketing communications	Comprehensive	• 84
<b>Customer privacy</b>			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Comprehensive	• 84
<b>Socioeconomic compliance</b>			
419-1	Non-compliance with laws and regulations in the social and economic area	Comprehensive	• 98, 112, 123, 133, 134
<b>ELECTRIC UTILITIES SECTOR DISCLOSURE</b>			
EU-1	Installed capacity	Core	• 19
EU-2	Net energy output	Core	• 19, 70-71
EU-3	Number of customers	Core	• 19-20, 84
EU-4	Length of transmission and distribution networks	Core	• 19, 86
EU-5	Respect of Kyoto Protocol	Core	• Level of respect: 7.75%
EU-10	Planned capacity	Comprehensive	• 54
EU-11	Average generation efficiency of thermal plants	Comprehensive	• Cogeneration plants, thermal plants and thermoelectric plants: 67.44% Waste-to-energy plants: 72.04%
EU-12	Transmission and distribution losses as a percentage of total energy	Comprehensive	• 86
EU-13	Biodiversity of offset habitats compared to the biodiversity of the affected areas <sup>64-65</sup>	Comprehensive	• 74
EU-15	Percentage of employees eligible to retire in the next 5 and 10 years	Comprehensive	• 95
EU-17	Days worked by contractor and subcontractor employees	Comprehensive	• 110
EU-18	Contractor and subcontractor employees that have undergone relevant health and safety training	Comprehensive	• 111
EU-22	Number of people physically or economically displaced and compensation	Comprehensive	• 122
EU-25	Number of injuries and fatalities to the public involving company assets	Comprehensive	• 123
EU-26	Percentage of population unserved in licensed distribution or service areas	Comprehensive	• The Group serves the entire population of the territories in which it manages the electricity distribution service
EU-27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime	Comprehensive	• 86
EU-28	Power outage frequency	Comprehensive	• 85
EU-29	Average power outage duration	Comprehensive	• 85
EU-30	Average plant availability factor	Comprehensive	• Cogeneration plants: 53.82% Waste-to-energy plants: 91.09%





# ASSURANCE OF THE INDEPENDENT AUDITOR



## ***Independent auditor's report on the consolidated non-financial statement***

*pursuant to article 3, paragraph 10, of Legislative Decree No. 254/2016 and article 5 of CONSOB Regulation No. 20267*

To the board of directors of Iren SpA

Pursuant to article 3, paragraph 10, of Legislative Decree No. 254 of 30 December 2016 (the "Decree") and article 5 of CONSOB Regulation No. 20267, we have performed a limited assurance engagement on the "Sustainability Report 2017 - Consolidated non-financial report pursuant to Legislative Decree 254/2016 (Directive 2014/95/EU)" of Iren SpA and its subsidiaries (hereafter "Iren Group" or the "Group") for the year ended 31 December 2017 prepared in accordance with article 4 of the Decree and approved by the Board of Directors on 7 March 2018 (hereafter the "NFS").

### ***Responsibility of the directors and of the board of statutory auditors for the NFS***

Directors are responsible for the preparation of the NFS in accordance with article 3 and 4 of the Decree and with the "Global Reporting Initiative Sustainability Reporting Standards" defined in 2016 by the GRI - Global Reporting Initiative ("GRI Standards") and with the "G4 Sector Disclosure – Electric Utilities" of 2013 ("G4 Sector Disclosure"), as laid down in paragraph "Note on methodology" of the NFS, identified by them as the reporting standards.

Directors are responsible, in the terms prescribed by law, for such internal control as management determines is necessary to enable the preparation of a NFS that is free from material misstatement, whether due to fraud or error.

Directors are responsible for identifying the content of the NFS, within the matters mentioned in article 3, paragraph 1, of the Decree, considering the activities and characteristics of Iren Group and to the extent necessary to ensure an understanding of the Group's activities, its performance, its results and related impacts.

Directors are responsible for defining the business and organisational model of the Group and, with reference to the matters identified and reported in the NFS, for the policies adopted by the Group and for the identification and management of risks generated and/or faced by the Group.

The board of statutory auditors is responsible for overseeing, in the terms prescribed by law, compliance with the Decree.

#### ***PricewaterhouseCoopers SpA***

Sede legale e amministrativa: Milano 20149 Via Monte Rosa 91 Tel. 0277851 Fax 027785240 Cap. Soc. Euro 6.890.000,00 i.v., C.F. e P.IVA e Reg. Imp. Milano 12979880155 Iscritta al n° 119644 del Registro dei Revisori Legali - Altri Uffici: **Ancona** 60131 Via Sandro Totti 1 Tel. 0712132311 - **Bari** 70122 Via Abate Gimma 72 Tel. 0805640211 - **Bologna** 40126 Via Angelo Finelli 8 Tel. 0516186211 - **Brescia** 25123 Via Borgo Pietro Wuhrer 23 Tel. 0303697501 - **Catania** 95129 Corso Italia 302 Tel. 0957532311 - **Firenze** 50121 Viale Gramsci 15 Tel. 0552482811 - **Genova** 16121 Piazza Piccapietra 9 Tel. 01029041 - **Napoli** 80121 Via dei Mille 16 Tel. 08136181 - **Padova** 35138 Via Vicenza 4 Tel. 049873481 - **Palermo** 90141 Via Marchese Ugo 60 Tel. 091349737 - **Parma** 43121 Viale Tanara 20/A Tel. 0521275911 - **Pescara** 65127 Piazza Ettore Troilo 8 Tel. 0854545711 - **Roma** 00154 Largo Fochetti 29 Tel. 06570251 - **Torino** 10122 Corso Palestro 10 Tel. 011556771 - **Trento** 38122 Viale della Costituzione 33 Tel. 0461237004 - **Treviso** 31100 Viale Felissent 90 Tel. 0422696911 - **Trieste** 34125 Via Cesare Battisti 18 Tel. 0403480781 - **Udine** 33100 Via Poscolle 43 Tel. 043225789 - **Varese** 21100 Via Albuzzi 43 Tel. 0332285039 - **Verona** 37135 Via Francia 21/C Tel. 0458263001 - **Vicenza** 36100 Piazza Pontelandolfo 9 Tel. 0444393311

[www.pwc.com/it](http://www.pwc.com/it)



### ***Auditor's Independence and Quality Control***

We are independent in accordance with the principles of ethics and independence set out in the Code of Ethics for Professional Accountants published by the International Ethics Standards Board for Accountants, which are based on the fundamental principles of integrity, objectivity, competence and professional diligence, confidentiality and professional behaviour. Our audit firm adopts International Standard on Quality Control 1 (ISQC Italy 1) and, accordingly, maintains an overall quality control system which includes processes and procedures for compliance with ethical and professional principles and with applicable laws and regulations.

### ***Auditor's responsibilities***

We are responsible for expressing a conclusion, on the basis of the work performed, regarding the compliance of the NFS with the Decree, with the GRI Standards and with the G4 Sector Disclosure. We conducted our engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information (hereafter “ISAE 3000 Revised”), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. The standard requires that we plan and apply procedures in order to obtain limited assurance that the NFS is free of material misstatement. The procedures performed in a limited assurance engagement are less in scope than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised, and, therefore, do not provide us with a sufficient level of assurance that we have become aware of all significant facts and circumstances that might be identified in a reasonable assurance engagement.

The procedures performed on the NFS were based on our professional judgement and consisted in interviews, primarily of company personnel responsible for the preparation of the information presented in the NFS, analyses of documents, recalculations and other procedures designed to obtain evidence considered useful.

In particular, we performed the following procedures:

1. analysis of the relevant matters reported in the NFS relating to the activities and characteristics of the company, in order to assess the reasonableness of the selection process used, in accordance with article 3 of the Decree and the with the reporting standard adopted;
2. analysis and assessment of the criteria used to identify the consolidation area, in order to assess their compliance with the Decree;
3. comparison of the financial information reported in the NFS with the information reported in Iren Group's consolidated financial statements;
4. understanding of the following matters:
  - business and organisational model of the Group, with reference to the management of the matters specified by article 3 of the Decree;
  - policies adopted by the Group with reference to the matters specified in article 3 of the Decree, actual results and related key performance indicators;
  - main risks, generated and/or faced by the Group, with reference to the matters specified in article 3 of the Decree.

With reference to those matters, we compared the information obtained with the information presented in the NFS and carried out the procedures described under point 5 a) below;

5. understanding of the processes underlying the preparation, collection and management of the significant qualitative and quantitative information included in the NFS.  
In particular, we held meetings and interviews with the management of Iren SpA and with the personnel of Iren Ambiente SpA, Ireti SpA, Iren Energia SpA, and we performed limited



analyses of documentary evidence, to gather information about the processes and procedures for the collection, consolidation, processing and submission of the non-financial information to the function responsible for the preparation of the NFS.

Moreover, for material information, considering the activities and characteristics of the Group:

- at a Group level,
  - a) with reference to the qualitative information included in the NFS, and in particular to the business model, the policies adopted and the main risks, we carried out interviews and acquired supporting documentation to verify their consistency with available evidence;
  - b) with reference to quantitative information, we performed analytical procedures as well as limited tests, in order to assess, on a sample basis, the accuracy of consolidation of the information;
- for the following companies: Iren SpA at the offices in Turin and Piacenza, Iren Ambiente SpA at the office in Turin and the site of Tecnoborgo (Piacenza), Iren Energia SpA at the office in Turin and the site of Rosone (Turin), Ireti SpA at the office in Piacenza, which were selected on the basis of their activities, their contribution to the performance indicators at a consolidated level and their location, we carried out site visits during which we met local management and gathered supporting documentation regarding the correct application of the procedures and calculation methods used for the key performance indicators.

### **Conclusions**

Based on the work performed, nothing has come to our attention that causes us to believe that the NFS of Iren Group as of 31 December 2017 has not been prepared, in all material respects, in compliance with articles 3 and 4 of the Decree, with the GRI Standards and with the G4 Sector Disclosure.

### **Other aspects**

With respect to the year ended 31 December 2016, the Group prepared a Sustainability report whose information, regarding 2015 and 2016, has been included, for comparative purposes, in the NFD. The Sustainability report has been subjected to voluntary limited assurance procedures in accordance with ISAE 3000 by PricewaterhouseCoopers Advisory SpA that has expressed an unqualified conclusion.

Turin, 29 March 2018

PricewaterhouseCoopers SpA

*Signed by*

Piero De Lorenzi  
(Partner)

Paolo Bersani  
(Authorized signatory)

*This report has been translated from the Italian original solely for the convenience of international readers.*



# GLOSSARY

## A

**ARERA** (Autorità di Regolazione per Energia Reti e Ambiente): Regulatory Authority for Energy Networks and Environment.

**ARPA** (Agenzia Regionale per la Protezione dell'Ambiente): Regional Environmental Protection Agency.

**ATERSIR**: Emilia-Romagna Territorial Agency for Waste and Water Services.

## B

**BEST AVAILABLE TECHNIQUES (BAT)**: the techniques used to regulate industrial operators' obligations as regards pollution prevention and control.

**BIOGAS**: gas produced by anaerobic fermentation from industrial or agricultural waste microorganisms (acidogenic bacteria, acetogenic bacteria and methanobacteria) or urban water treatment sludge; the methane contained in biogas can be used for producing energy.

**BOD**: with the term BOD (biochemical oxygen demand), it is intended the quantity of oxygen consumed during a specified time (5 days for BOD5), at a given temperature, to decompose organic substances present in the water through the action of bacteria (cellular respiration). A high biochemical oxygen demand indicates intense biodegradation of organic matter, and may indicate the presence of organic pollution. It is thus an indirect measure of pollution levels. It is expressed in %.

## C

**CO**: carbon monoxide.

**CO2**: carbon dioxide.

**COD**: the acronym COD (chemical oxygen demand) refers to the amount of oxygen required to completely oxidise the organic and inorganic compounds present in a water sample. It is thus an indicator for measuring the degree of pollution in the water from mainly organic, oxidisable substances. It is expressed in %.

**CODE OF ETHICS**: document setting forth the principles, conduct, commitments and ethical responsibilities to be adopted in all company business by the company's directors, employees and consultants.

**COGENERATION**: the simultaneous production of electricity and thermal energy used for different purposes.

**CORPORATE GOVERNANCE**: the set of rules by which a company is managed and controlled.

**CSR**: Corporate Social Responsibility.

## D – E – F

**DISTRICT HEATING**: the transmission of heat to a distant location, using water flowing in two pipes, one delivery pipe with hot water and one return pipe with colder water.

**EIA**: Environmental Impact Assessment.

**EMAS (ENVIRONMENTAL MANAGEMENT AND AUDIT SCHEME)**: environmental management and audit pursuant to the European Community Regulation 761/2001.

**EMISSION TRADING SYSTEM (ETS)**: flexible mechanism envisaged by the Kyoto Protocol, which aims to enable the exchange of emission rights between Countries or Companies in relation to their targets for reducing greenhouse gas emissions.

**END CUSTOMER**: an individual or company that acquires electricity exclusively for its own use.

**ENERGY EFFICIENCY BONDS (EEB) (COMMONLY KNOWN AS WHITE CERTIFICATES)**: Energy efficiency bonds (EEB), established by the decrees issued by the Ministry for Productive Activities in agreement with the Ministry for the Environment, Land and Sea on 20 July 2004 (M.D. of 20 July 2004), lay down the energy savings that electricity and gas distributors with user bases of over 50,000 customers are required to meet. The EEBs are





valid for five years starting from the reference year and are issued by the EMO.

**ENERGY SERVICE COMPANY (ESCO):** companies whose business objective is to develop energy saving projects and who are accredited as such by the AEEGSI.

**ETHICAL INDEXES:** indexes that monitor the trend of the performance of a basket of companies according to financial, economic and also ethical, environmental or social criteria.

## G

**GAS TURBINE:** a machine that converts the energy of steam generated in a boiler or from a steam reservoir into the mechanical energy of a rotary shaft.

**GIGAJoule (GJ):** a unit of measurement for energy (of any kind) adopted by the International System (3.6 GJ are equivalent to 1 GWh).

**GIGAWATT (GW):** a unit of measurement for power (of any kind) equivalent to one million kilowatts.

**GIGAWATT-HOUR (GWh):** a unit of measurement for energy (of any kind) equivalent to one million kilowatts per hour.

**GREEN BOND:** debt instruments whose proceeds are used exclusively to finance or refinance all or part of projects/activities having a clear positive impact on the environment (Eligible Projects/Activities).

**GREEN CERTIFICATES:** Green Certificates are annual certificates issued by the GSE (Electricity Services Provider), which correspond to the production of 1 MWh of energy from renewable sources. Starting from 2002, based on the Decree 79/99, it is mandatory for producers and importers to introduce energy from renewable sources into their networks, in quantities equal to a percentage of the total electricity produced or imported during the previous year from conventional sources (net of exports, self-consumptions of the plant and cogeneration).

**GREENHOUSE GASES:** gases transparent to solar radiation that prevent the dispersion of heat from the Earth, thus causing the atmosphere to overheat. Besides those of natural origin, the main greenhouse gases produced by man are carbon dioxide, natural gas, chlorofluorocarbons and nitrogen oxides.

**GROSS PRODUCTION:** electricity produced in the period of time considered, as measured at the terminals of the electricity generator unit.

**GSE (Electricity Services Provider):** established pursuant to article 3 of the Italian Legislative Decree 79/99, it is a Joint-Stock Company, whose shares are held by the Treasury, which provides incentives for the production of electricity from renewable and assimilated sources and that deals with the qualification of renewable sources plants and their electricity production.

## H - I

**HYDROELECTRIC:** a hydroelectric plant is a plant in which the potential energy of water is transformed into electricity. Hydroelectric plants may be of the through-flow, storage or pumped-storage type.

**HV:** high voltage, i.e. 132 kV, 220 kV and 380 kV.

**IEA:** Integrated Environmental Authorisation.

**IEC:** Integrated Environmental Centre.

## K - L

**KILOCALORIE (kcal):** the unit of measurement for heat (thermal energy). One kcal is the amount of heat necessary to raise the temperature of 1 kg of water by 1°C.

**KILOVOLT (kV):** the unit of measurement for voltage equivalent to 1,000 volts.

**KILOWATT (kW):** the unit of measurement for power (of any kind) equivalent to 1,000 watts.

**KILOWATT-HOUR (kWh):** the unit of measurement for energy (of any kind) equivalent to 1,000 watts per hour.

**LV:** low voltage, i.e. between 220/380 V.

## M – N – O

**MBO:** Management By Objectives

**MEGAWATT (MW):** a unit of measurement of power (of any kind) equivalent to one million watts.

**MEGAWATT-HOUR (MWh):** a unit of measurement for energy (of any kind) equivalent to one thousand kilowatts per hour.

**MV:** medium voltage, i.e. between 1 and 30 kV.

**NET PRODUCTION:** gross production minus the electricity consumed in running the generator unit, including the step-up transformer.

**NOTCH:** level in the rating scale.

**NOX:** nitrogen monoxide.

**OHSAS 18001:** the OHSAS (Occupational Health & Safety Assessment Series) 18001 standard is an internationally recognised benchmark for certifying workplace health and safety management systems.

## P

**POWER EXCHANGE:** virtual place for a meeting with demand and offer for the sale of wholesale electricity. The economic management of the power exchange is entrusted to the EMO, pursuant to art. 5 of Italian Legislative Decree 79/99.

**PRODUCTION CAPACITY** estimated energy that can be produced by each producer.

**PUMPING:** plant consisting of one or more pumps which perform the function of making a liquid flow inside a pipe.

## R

**RENEWABLE ENERGY:** sun, wind, water resources, geothermal resources, tides, waves, and the transformation of plant products, organic and inorganic waste into electricity.

**RENEWABLE SOURCES:** non-fossil renewable sources of energy (wind, sun, geothermal sources, waves, tides, water, biomass, landfill gas, gas from treatment processes and biogas) in accordance with article 2 of Italian FER (Renewable Energy Sources) Decree.

## S

**SCM:** standard cubic metre.

**SERVICE CHARTER:** company document that establishes the quality standards of company services.

**SOCIAL COOPERATIVES:** in compliance with Law 381/91 social cooperatives “pursue the general interest of the community to promote human and social integration of citizens” through management of social-health and educational services and the performance of activities aimed at providing employment for disadvantaged people.

**STAKEHOLDERS:** the set of parties that interact with the company, or the individual, community or organisation that can influence or be influenced by the activity of the company.

**SUSTAINABILITY REPORT:** instrument that takes into account the impacts generated by the company with reference to the three dimensions of sustainability: economic, social and environmental.

**SUSTAINABLE DEVELOPMENT:** economic growth of a company in the long term with a low environmental impact and good relations with the community.

## T

**TERAWATT-HOUR (TWh):** one billion kilowatt-hours.

**TERNA:** the set of conductors for a three-phase power line.

**THERMOELECTRIC:** an electricity generating plant that uses fossil fuels.

**TOE:** tonne of oil equivalent; the quantity of primary fossil fuel replaced, that is, the amount of fuel otherwise



required to produce the same quantity of useful energy in Italy.

**TOTAL POWER:** the total amount of electric or thermal energy of the various producers installed in a plant.

**TSS:** the term TSS (Total Suspended Solids), which are the cause of the turbidity of the sewage, is understood as the sum of suspended and filterable solids. It represents the totality of the substances present in the sample after drying at 105°C. The figure is expressed in %.

## U – V

**UNI EN ISO 14001:** international technical standard for the certification of environmental management systems.

**UNI EN ISO 9001:** international technical standard for the certification of quality management systems.

**VOLT:** unit of measurement for electric voltage.

## W

**WASTE AND WATER REGULATING AUTHORITY (AMBITO TERRITORIALE OTTIMALE - ATO):** The Waste and Water Regulatory Authorities (Ambito Territoriale Ottimale), pursuant to Italian Law 36 of 1994, determines the territorial level of organisation of the Integrated Water Service in view of overcoming the fragmentation of the operators and the achievement of adequately proportioned management; the Regional Law defines its boundaries based on the river basin.

**WASTE:** Italian Legislative Decree no. 152 of 3 April 2006 defines waste as “any substance or object that lies in the categories listed in annex A of the fourth part of this decree and that has already been or is to be disposed of by its owner”. This decree classifies waste, according to its origin, as municipal or industrial, and, according to its level of hazardousness, as hazardous or non-hazardous.

**WATT:** unit of measurement for electric power.

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<https://www.gruppoiren.it/scheda-di-valutazione-per-gli-stakeholder>

**Do you want to contact the Work Group?**

Write us:

[sostenibilita@gruppoiren.it](mailto:sostenibilita@gruppoiren.it)

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**2017 Sustainability Report is prepared by the Corporate Social Responsibility and Local Committees Department.**

Work Group:

Emiliano Bussolo

Beatrice Cavedoni

Damiano Durante

Mara Gaudi

Giulia Mancini

Simone Mazzata

Laura Pellegrini

Marta Carlotta Scarrone

Patrizia Tellini

Selina Xerra

Particular thanks goes to all of the colleagues of the Iren Group that contributed to the preparation of the Sustainability Report and to the members of the Local Committees for their commitment in the materiality analysis.





**Iren S.p.A.**  
Via Nubi di Magellano, 30  
42123 Reggio Emilia - Italy  
[www.gruppoiren.it](http://www.gruppoiren.it)